Gene	Typo
ERBB2	Type Amplification
PGAP3	Amplification
CCND1	Amplification
ORAOV1	Amplification
ZNF703	•
	Amplification
CLNS1A NDUFC2	Amplification
	Amplification
PAK1	Amplification
THRSP	Amplification
GAB2	Amplification
C11orf67	Amplification
RSF1	Amplification
USP35	Amplification
KCTD14	Amplification
ALG8	Amplification
INTS4	Amplification
GDPD4	Amplification
AQP11	Amplification
KCTD21	Amplification
TUBD1	Amplification
RPS6KB1	Amplification
MYC	Amplification
ZNF217	Amplification
IKBKB	Amplification
POLB	Amplification
VDAC3	Amplification
DKK4	Amplification
hsa-mir-587	Amplification
? 553137	Amplification
•	Amplification
CTSS	Amplification
ENSA	Amplification
MCL1	Amplification
ADAMTSL4	Amplification
GOLPH3L	Amplification
HORMAD1	Amplification
IGF1R	Amplification
PGPEP1L	
	Amplification
FAM169B	Amplification
	Amplification
CPM	Amplification
LYZ	Amplification
YEATS4	Amplification
FRS2	Amplification
CPSF6	Amplification

A1:C:1:
Amplification
Amplification

LGALS8	Amplification
MTR	Amplification
NID1	Amplification
RGS7	Amplification
RYR2	Amplification
TARBP1	Amplification
TBCE	Amplification
GPR137B	Amplification
TSNAX	Amplification
ZNF124	Amplification
GNPAT	Amplification
KMO	Amplification
EXO1	Amplification
GGPS1	Amplification
TOMM20	Amplification
CEP170	Amplification
AKT3	Amplification
ZNF238	Amplification
CAPN9	Amplification
SDCCAG8	Amplification
COG2	Amplification
RBM34	Amplification
OPN3	Amplification
TRIM58	Amplification
AHCTF1	Amplification
OR1C1	Amplification
OR2M4	Amplification
OR2L2	Amplification
OR2L1P	Amplification
OR2T1	Amplification
DISC2	Amplification
DISC1	Amplification
PPPDE1	Amplification
SCCPDH	Amplification
ARID4B	Amplification
EGLN1	Amplification
KIAA1383	Amplification
KIF26B	Amplification
HEATR1	•
ZNF692	Amplification
	Amplification
ERO1LB	Amplification
FMN2	Amplification
ZNF695	Amplification
SIPA1L2	Amplification
ZP4	Amplification
TFB2M	Amplification

GREM2	Amplification
SMYD3	Amplification
ARV1	Amplification
TTC13	Amplification
PGBD5	Amplification
ZNF669	Amplification
ZNF672	Amplification
PCNXL2	Amplification
SH3BP5L	Amplification
OR2G3	Amplification
OR2G2	Amplification
OR2C3	Amplification
C1orf124	Amplification
C1orf57	Amplification
EFCAB2	Amplification
KIAA1804	Amplification
ZNF496	Amplification
C1orf198	Amplification
ZNF670	Amplification
NLRP3	Amplification
FAM36A	Amplification
OR2M5	Amplification
OR2M3	Amplification
OR2T12	Amplification
OR14C36	Amplification
OR2T34	Amplification
OR2T10	Amplification
OR2T4	Amplification
OR2T11	Amplification
OR2B11	Amplification
WDR64	Amplification
C1orf131	Amplification
EDARADD	Amplification
SLC35F3	Amplification
B3GALNT2	Amplification
C1orf150	Amplification
LOC148824	Amplification
LOC149134	Amplification
EXOC8	Amplification
CNST	Amplification
PLD5	Amplification
C1orf100	Amplification
OR2T6	•
C1orf101	Amplification
	Amplification
PGBD2	Amplification
OR2L13	Amplification

OR14A16	Amplification
NCRNA00201	Amplification
VN1R5	Amplification
LOC339535	Amplification
OR6F1	Amplification
OR2W3	Amplification
OR2T8	Amplification
OR2T3	Amplification
OR2T29	Amplification
IRF2BP2	Amplification
FAM89A	Amplification
C1orf31	Amplification
C1orf229	Amplification
OR2M1P	Amplification
OR11L1	Amplification
OR2L8	Amplification
OR2AK2	Amplification
OR2L3	Amplification
OR2M2	Amplification
OR2T33	Amplification
OR2M7	Amplification
OR2G6	Amplification
OR2T2	Amplification
OR2T5	Amplification
OR14I1	Amplification
OR2T27	Amplification
OR2T35	Amplification
TRIM67	Amplification
MAP1LC3C	Amplification
OR2W5	Amplification
OR13G1	Amplification
LOC646627	Amplification
SNORA14B	Amplification
	Amplification
	Amplification
IL11	Amplification
PTPRH	Amplification
RPL28	Amplification
SYT5	•
	Amplification
TNNI3	Amplification
TNNT1	Amplification
U2AF2	Amplification
SAPS1	Amplification
HSPBP1	Amplification
UBE2S	Amplification
CCDC106	Amplification

EDN4	A manalificantian
EPN1 ZNF580	Amplification
	Amplification
ZNF581 PPP1R12C	Amplification
	Amplification
EPS8L1	Amplification
NAT14	Amplification
ISOC2	Amplification
BRSK1	Amplification
SUV420H2	Amplification
FIZ1	Amplification
ZNF628	Amplification
RDH13	Amplification
COX6B2	Amplification
TMEM190	Amplification
ZNF524	Amplification
ZNF784	Amplification
ZNF579	Amplification
NLRP11	Amplification
TMEM86B	Amplification
SSC5D	Amplification
TMEM150B	Amplification
FAM71E2	Amplification
NLRP9	Amplification
RFPL4A	Amplification
C19orf51	Amplification
SBK2	Amplification
SHISA7	Amplification
NINJ2	Amplification
RAD52	Amplification
KDM5A	Amplification
SLC6A12	Amplification
SLC6A13	Amplification
ERC1	Amplification
WNK1	Amplification
CCDC77	Amplification
B4GALNT3	Amplification
HSN2	Amplification
IQSEC3	Amplification
FAM138D	Amplification
LOC1002887	
	•
AFM	Amplification
AFP	Amplification
ALB	Amplification
ANKRD17	Amplification
COX18	Amplification
ITPR1	Amplification

BHLHE40	Amplification
SUMF1	Amplification
EGOT	Amplification
FOXA1	Amplification
MIPOL1	Amplification
CD59	Amplification
CSTF3	Amplification
WT1	Amplification
HIPK3	Amplification
EIF3M	Amplification
C11orf41	Amplification
FBXO3	Amplification
WIT1	Amplification
TCP11L1	Amplification
PRRG4	Amplification
QSER1	Amplification
DEPDC7	Amplification
LOC283267	Amplification
CCDC73	Amplification
EGFR	Amplification
LANCL2	Amplification
VOPP1	Amplification
41166	Amplification
FKBP9L	Amplification
LOC442308	Amplification
PHKB	Amplification
ALOX5AP	Amplification
HMGB1	Amplification
UBL3	Amplification
USPL1	Amplification
KATNAL1	Amplification
	Amplification
USP22	Amplification
EDN1	Amplification
GCNT2	Amplification
GMPR	•
HIVEP1	Amplification
	Amplification
JARID2	Amplification
MAK	Amplification
NEDD9	Amplification
ATXN1	Amplification
TFAP2A	Amplification
TPMT	Amplification
DEK	
	Amplification
GCM2	Amplification
GCM2 CD83	=

NUP153	Amplification
RANBP9	Amplification
CAP2	Amplification
SIRT5	Amplification
MYLIP	Amplification
TBC1D7	Amplification
NOL7	Amplification
FAM8A1	Amplification
TMEM14C	Amplification
GFOD1	Amplification
ELOVL2	Amplification
PAK1IP1	Amplification
CCDC90A	Amplification
KIF13A	Amplification
TMEM14B	Amplification
DTNBP1	Amplification
C6orf105	Amplification
C6orf114	Amplification
KDM1B	Amplification
RBM24	Amplification
RNF182	Amplification
PHACTR1	Amplification
LOC221710	Amplification
SYCP2L	Amplification
C6orf218	Amplification
C6orf52	Amplification
NHLRC1	Amplification
ERVFRDE1	Amplification
TMEM170B	Amplification
hsa-mir-3155	Amplification
	Amplification
ATP5C1	Amplification
CALML3	Amplification
AKR1C4	Amplification
KLF6	Amplification
AKR1C1	Amplification
AKR1C2	Amplification
GATA3	Amplification
GDI2	Amplification
IL2RA	Amplification
IL15RA	Amplification
ITIH2	Amplification
PFKFB3	Amplification
PFKP	Amplification
PHYH	Amplification
PRKCQ	Amplification
INNCQ	Amplification

PRPF18	Amplification
AKR1C3	Amplification
CDC123	Amplification
USP6NL	Amplification
OPTN	Amplification
NET1	Amplification
PITRM1	Amplification
CELF2	Amplification
NUDT5	Amplification
SEPHS1	Amplification
KIN	Amplification
UPF2	Amplification
CALML5	Amplification
ANKRD16	Amplification
C10orf18	Amplification
SEC61A2	Amplification
MCM10	Amplification
DHTKD1	Amplification
FRMD4A	Amplification
CAMK1D	Amplification
SFMBT2	Amplification
ECHDC3	Amplification
ASB13	Amplification
TUBAL3	Amplification
ITIH5	-
AKR1E2	Amplification
CCDC3	Amplification
TAF3	Amplification
	Amplification
FBXO18	Amplification
RBM17	Amplification
UCN3	Amplification
SFTA1P	Amplification
UCMA	Amplification
BEND7	Amplification
LOC254312	Amplification
C10orf47	Amplification
LOC283070	Amplification
LOC338588	Amplification
AKR1CL1	Amplification
tAKR	Amplification
FLJ45983	Amplification
LOC1002160	Amplification
hsa-mir-1256	Deletion
hsa-mir-1290	Deletion
ALPL	Deletion
C1QA	Deletion

C1QB	Deletion
C1QC	Deletion
CAPZB	Deletion
CASP9	Deletion
TNFRSF8	Deletion
CDA	Deletion
CDC42	Deletion
CLCN6	Deletion
CLCNKA	Deletion
CLCNKB	Deletion
CORT	Deletion
DDOST	Deletion
DFFA	Deletion
ECE1	Deletion
EPHA2	Deletion
EPHA8	Deletion
MTOR	Deletion
HSPG2	Deletion
HTR6	Deletion
MFAP2	Deletion
MTHFR	Deletion
NBL1	Deletion
NPPA	Deletion
NPPB	Deletion
PAX7	Deletion
PEX14	Deletion
PGD	Deletion
PLA2G2A	Deletion
PLA2G5	Deletion
PLOD1	Deletion
EXOSC10	Deletion
RAP1GAP	Deletion
RSC1A1	
	Deletion
SDHB	Deletion
SRM	Deletion
TNFRSF1B	Deletion
ZBTB17	Deletion
PRDM2	Deletion
AKR7A2	Deletion
ALDH4A1	Deletion
EIF4G3	Deletion
DHRS3	Deletion
CROCC	Deletion
ZBTB40	Deletion
MFN2	Deletion
CELA3A	Deletion

ANGPTL7 Deletion MAD2L2 Deletion **PDPN** Deletion MASP2 Deletion MST1P2 Deletion MST1P9 Deletion PADI2 Deletion **CTRC** Deletion AKR7A3 Deletion **SPEN** Deletion **KIAA0090** Deletion PLEKHM2 Deletion OTUD3 Deletion KAZ Deletion DNAJC16 Deletion UBR4 Deletion ATP13A2 Deletion **TARDBP** Deletion CELA3B Deletion PADI4 Deletion C1orf144 Deletion FBXO2 Deletion FBXO6 Deletion PLA2G2D Deletion HSPB7 Deletion HSPC157 Deletion UBIAD1 Deletion PADI1 Deletion PLA2G2E Deletion HP1BP3 Deletion CELA2B Deletion MRTO4 Deletion PADI3 Deletion WNT4 Deletion FBXO42 Deletion **RNF186** Deletion FBLIM1 Deletion PQLC2 Deletion CASZ1 Deletion **TMEM51** Deletion ARHGEF10L Deletion VPS13D Deletion CAMK2N1 Deletion NBPF1 Deletion NECAP2 Deletion RCC2 Deletion **AGTRAP** Deletion PTCHD2 Deletion KIF17 Deletion MIIP Deletion CELA2A Deletion PLA2G2F Deletion PINK1 Deletion PRAMEF1 Deletion PRAMEF2 Deletion EFHD2 Deletion C1orf89 Deletion MUL1 Deletion **AGMAT** Deletion TAS1R2 Deletion ACTL8 Deletion USP48 Deletion NBPF3 Deletion DDI2 Deletion CROCCL1 Deletion IGSF21 Deletion **KIAA2013** Deletion C1orf158 Deletion FBXO44 Deletion CROCCL2 Deletion FHAD1 Deletion AADACL3 Deletion IFFO2 Deletion KLHDC7A Deletion VWA5B1 Deletion UBXN10 Deletion ARHGEF19 Deletion C1orf127 Deletion C1orf64 Deletion FAM43B Deletion C1orf126 Deletion AKR7L Deletion TMCO4 Deletion SLC25A34 Deletion **ESPNP** Deletion AADACL4 Deletion PRAMEF5 | 34 Deletion HNRNPCL1 Deletion PRAMEF9 | 34 Deletion PRAMEF10 Deletion FAM131C Deletion PADI6 Deletion

C1orf187	Deletion
SPATA21	Deletion
APITD1	Deletion
TMEM82	Deletion
PRAMEF12	Deletion
PRAMEF8 39	Deletion
PRAMEF18 3	Deletion
PRAMEF17	Deletion
PLA2G2C	Deletion
PRAMEF4	Deletion
PRAMEF13	Deletion
SH2D5	Deletion
PRAMEF3	Deletion
LDLRAD2	Deletion
PRAMEF11	Deletion
PRAMEF6	Deletion
_	
LOC440563	Deletion
UQCRHL	Deletion
C1orf151	Deletion
PRAMEF20 6	
LOC649330	Deletion
PRAMEF22	Deletion
PRAMEF16	Deletion
SNORA59B 6	Deletion
PRAMEF14 7	Deletion
FLJ37453	Deletion
CSMD1	Deletion
ATP5D	Deletion
CIRBP	Deletion
EFNA2	Deletion
GPX4	Deletion
STK11	Deletion
SBNO2	Deletion
C19orf24	Deletion
MUM1	Deletion
MIDN	Deletion
C19orf23	Deletion
C190ff25	Deletion
RB1	Deletion
LPAR6	Deletion
CDKN2A	Deletion
CDKN2B	Deletion
MTAP	Deletion
C9orf53	Deletion
CDKN2BAS	Deletion
PTEN	Deletion

KILLIN Deletion hsa-mir-4269 Deletion hsa-mir-3133 Deletion hsa-mir-149 Deletion **AGXT** Deletion KIF1A Deletion BOK Deletion COL6A3 Deletion **DTYMK** Deletion GBX2 Deletion GPC1 Deletion GPR35 Deletion **HDLBP** Deletion NDUFA10 Deletion 41154 Deletion PDCD1 Deletion PPP1R7 Deletion SPP2 Deletion PER2 Deletion LRRFIP1 Deletion HDAC4 Deletion FARP2 Deletion ARL4C Deletion RAMP1 Deletion STK25 Deletion COPS8 Deletion CAPN10 Deletion **PASK** Deletion ATG4B Deletion SH3BP4 Deletion SNED1 Deletion TRAF3IP1 Deletion ANO7 Deletion PRLH Deletion THAP4 Deletion ANKMY1 Deletion **SCLY** Deletion ASB1 Deletion UGT1A10 Deletion UGT1A8 Deletion UGT1A7 Deletion UGT1A6 Deletion UGT1A5 Deletion UGT1A9 Deletion UGT1A4 Deletion UGT1A1 Deletion

UGT1A3	Deletion
HJURP	Deletion
HES6	Deletion
CXCR7	Deletion
RNPEPL1	Deletion
GAL3ST2	Deletion
RAB17	Deletion
TRPM8	Deletion
MLPH	Deletion
IQCA1	Deletion
C2orf54	Deletion
ILKAP	Deletion
ING5	Deletion
MGC16025	Deletion
AGAP1	Deletion
TWIST2	Deletion
NEU4	Deletion
MTERFD2	Deletion
UBE2F	Deletion
OTOS	Deletion
MYEOV2	Deletion
_	Deletion
OR6B3	
LOC151174	Deletion
MSL3L2	Deletion
C2orf85	Deletion
DUSP28	Deletion
ESPNL	Deletion
RBM44	Deletion
AQP12A	Deletion
KLHL30	Deletion
OR6B2	Deletion
ASB18	Deletion
DNAJB3	Deletion
LOC643387	Deletion
PRR21	Deletion
AQP12B	Deletion
D2HGDH	Deletion
LOC728323	Deletion
PP14571	Deletion
hsa-mir-1305	Deletion
SLC25A4	Deletion
CASP3	Deletion
DCTD	Deletion
F11	Deletion
ACSL1	Deletion
FAT1	Deletion

FRG1	Deletion
ING2	Deletion
IRF2	Deletion
KLKB1	Deletion
MTNR1A	Deletion
TLR3	Deletion
SORBS2	Deletion
DUX4 22947	Deletion
FAM149A	Deletion
PDLIM3	Deletion
CLDN22	Deletion
UFSP2	Deletion
CDKN2AIP	Deletion
ODZ3	Deletion
LRP2BP	Deletion
TUBB4O	Deletion
STOX2	Deletion
KIAA1430	Deletion
C4orf41	Deletion
MLF1IP	Deletion
WWC2	Deletion
SNX25	Deletion
MGC45800	Deletion
ZFP42	Deletion
ENPP6 C4orf38	Deletion Deletion
RWDD4A	Deletion
CCDC111	Deletion
TRIML2	Deletion
CCDC110	Deletion
CYP4V2	Deletion
TRIML1	Deletion
ANKRD37	Deletion
HELT	Deletion
FAM92A3	Deletion
C4orf47	Deletion
FRG2	Deletion
SLED1	Deletion
LOC653544	Deletion
LOC653545	Deletion
hsa-mir-744	Deletion
MAP2K4	Deletion
GPR31	Deletion
KIF25	Deletion
MLLT4	Deletion
TCP10	Deletion

C6orf123	Deletion
UNC93A	Deletion
SMOC2	Deletion
FRMD1	Deletion
TTLL2	Deletion
DACT2	Deletion
TCP10L2	Deletion
C6orf124	Deletion
HGC6.3	Deletion
OPCML	Deletion
IGSF9B	Deletion
NCAPD3	Deletion
ACAD8	Deletion
B3GAT1	Deletion
THYN1	Deletion
JAM3	Deletion
GLB1L2	Deletion
VPS26B	Deletion
GLB1L3	Deletion
SPATA19	Deletion
LOC283174	Deletion
LOC1001282	
hsa-mir-4271	
hsa-mir-711	Deletion
hsa-mir-2115	
hsa-mir-566	Deletion
hsa-mir-425	
hsa-mir-191	
hsa-mir-135a	
hsa-let-7g	Deletion
ACY1	Deletion
ALAS1	Deletion
AMT	Deletion
APEH	Deletion
RHOA	Deletion
SLC25A20	Deletion
CAMP	Deletion
CDC25A	Deletion
CISH	Deletion
COL7A1	Deletion
DAG1	Deletion
DOCK3	Deletion
DUSP7	Deletion
CELSR3	Deletion
GNAI2	Deletion
GNAT1	Deletion

GPX1	Deletion
GRM2	Deletion
HYAL1	Deletion
IMPDH2	Deletion
ITIH1	Deletion
ITIH3	Deletion
ITIH4	Deletion
LAMB2	Deletion
MST1	Deletion
MST1R	Deletion
PFKFB4	Deletion
PLXNB1	Deletion
PRKAR2A	Deletion
PRKCD	Deletion
QARS	Deletion
RPL29	Deletion
SEMA3F	Deletion
NEK4	Deletion
TCTA	Deletion
TKT	Deletion
TNNC1	Deletion
UBA7	Deletion
USP4	Deletion
UQCRC1	Deletion
IFRD2	Deletion
MAPKAPK3	Deletion
SEMA3B	Deletion
MANF	Deletion
BAP1	Deletion
HYAL3	Deletion
HYAL2	Deletion
BSN	Deletion
RRP9	Deletion
CACNA2D2	Deletion
VPRBP	Deletion
IP6K1	Deletion
PARP3	Deletion
RBM6	Deletion
RBM5	Deletion
NME6	Deletion
TRAIP	Deletion
ARIH2	Deletion
NPRL2	Deletion
USP19	Deletion
SLC38A3	Deletion
CYB561D2	Deletion

TMEM115	Deletion
WDR6	Deletion
RASSF1	Deletion
NISCH	Deletion
TREX1	Deletion
TUSC2	Deletion
TWF2	Deletion
LAMB2L	Deletion
RAD54L2	Deletion
STAB1	Deletion
NAT6	Deletion
ABHD14A	Deletion
POC1A	Deletion
NDUFAF3	Deletion
DNAH1	Deletion
GNL3	Deletion
SPCS1	Deletion
RBM15B	Deletion
GMPPB	Deletion
C3orf18	Deletion
SHISA5	Deletion
ZMYND10	Deletion
TEX264	Deletion
CCDC72	Deletion
ZNF589	Deletion
HEMK1	Deletion
IP6K2	Deletion
SFMBT1	Deletion
NCKIPSD	Deletion
PHF7	Deletion
TLR9	Deletion
P4HTM	Deletion
QRICH1	Deletion
DALRD3	Deletion
PBRM1	Deletion
DCP1A	Deletion
GLT8D1	Deletion
SEMA3G	Deletion
PCBP4	Deletion
RNF123	Deletion
CCDC71	Deletion
NT5DC2	Deletion
SLC26A6	Deletion
CAMKV	Deletion
CCDC51	Deletion
WDR82	Deletion
VVDNOZ	שכופנוטוו

ATRIP	Deletion
NICN1	Deletion
MON1A	Deletion
ABHD14B	Deletion
UCN2	Deletion
RFT1	Deletion
GPR62	Deletion
IQCF1	Deletion
GLYCTK	Deletion
PPM1M	Deletion
C3orf45	Deletion
KLHDC8B	Deletion
FBXW12	Deletion
CCDC36	Deletion
C3orf62	Deletion
TMEM110	Deletion
AMIGO3	Deletion
CDHR4	Deletion
C3orf54	Deletion
IQCF2	
-	Deletion
IQCF5	Deletion
MUSTN1	Deletion
IQCF3	Deletion
TMEM89	Deletion
IQCF6	Deletion
LOC440957	Deletion
SPINK8	Deletion
C3orf71	Deletion
LOC646498	Deletion
SNORD19	Deletion
SNORD69	Deletion
SNORD19B	Deletion
C3orf74	Deletion
hsa-mir-3118	Deletion
hsa-mir-3156	Deletion
BAGE	Deletion
TPTE	Deletion
C21orf15	Deletion
BAGE2	Deletion
C21orf99	Deletion
LIPI	Deletion
POTED	Deletion
C21orf81	Deletion
LOC1001322	
MLL3	Deletion
hsa-mir-3118	
1130 11111-2110	Deletion

hsa-mir-3118 Deletion hsa-mir-1268 Deletion hsa-mir-211 Deletion APBA2 Deletion BCL8 Deletion **GABRA5** Deletion GABRB3 Deletion GABRG3 Deletion **IPW** Deletion TRPM1 Deletion NDN Deletion OCA2 Deletion **SNRPN** Deletion TJP1 Deletion UBE3A Deletion MKRN3 Deletion PAR5 Deletion HERC2 Deletion **SNURF** Deletion MTMR15 Deletion CYFIP1 Deletion FAM189A1 Deletion C15orf2 Deletion DKFZP434L1{ Deletion KLF13 Deletion MAGEL2 Deletion MTMR10 Deletion NDNL2 Deletion ATP10A Deletion NIPA2 Deletion CHRFAM7A Deletion FAM7A3 | 898 Deletion ARHGAP11B Deletion TUBGCP5 Deletion NIPA1 Deletion PAR1 Deletion OR4N4 Deletion GOLGA6L1 Deletion GOLGA8G | 21 Deletion **GOLGA9P** Deletion SNORD109B Deletion SNORD115-1 Deletion WHAMML1 Deletion POTEB | 3390 Deletion PAR4 Deletion PAR-SN Deletion

OR4M2 Deletion

OR4N3P Deletion

HERC2P2 Deletion

NF1P1|4402 Deletion

WHAMML2 Deletion

WITH THE DETECTION

LOC646214 Deletion

CXADRP2 Deletion

SNORD116-1 Deletion

GOLGA6L6 Deletion

LOC727924 Deletion

GOLGA8C Deletion

PWRN1 Deletion

PWRN2 Deletion

SNORD116-1 Deletion

SNORD116-2 Deletion

SNORD116-3 Deletion

SNORD116-4 Deletion

SNORD116-5 Deletion

SNORD116-8 Deletion

SNORD116-1 Deletion

- -

SNORD116-1 Deletion

SNORD116-2 Deletion

SNORD116-2 Deletion SNORD116-2 Deletion

SNORDITO-2 Deletion

SNORD116-2 Deletion

SNORD116-2 Deletion

SNORD115-2 Deletion

SNORD116-2 Deletion

SNORD116-2 Deletion

SNORD115-3 Deletion

SNORD115-4 Deletion

SNORD115-5 Deletion

SNORD115-6 Deletion

SNORD115-7 Deletion SNORD115-8 Deletion

SNORD115-9 Deletion

SNORD115-1 Deletion

SNORD115-1 Deletion

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- SNORD116-2 Deletion
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- SNORD115-4 Deletion
- HBII-52-24 Deletion
- HBII-52-27 Deletion
- HBII-52-28 Deletion
- HBII-52-45 Deletion
- HBII-52-46 Deletion
- GOLGA8F | 1C Deletion
- GOLGA8DP Deletion
- FAM7A2 Deletion
- IL6ST Deletion
- MAP3K1 Deletion
- DDX4 Deletion
- GPBP1 Deletion
- ANKRD55 Deletion
- C5orf35 Deletion
- IL31RA Deletion
- MIER3 Deletion
- ACTBL2 Deletion
- hsa-mir-4298 Deletion
- hsa-mir-675 Deletion
- hsa-mir-483 Deletion
- hsa-mir-210 Deletion
- AP2A2 Deletion
- ASCL2 Deletion
- CARS Deletion
- CD81 Deletion

CD151	Deletion
CDKN1C	Deletion
CTSD	Deletion
DRD4	Deletion
DUSP8	Deletion
HRAS	Deletion
IGF2	Deletion
INS	Deletion
IRF7	Deletion
KCNQ1	Deletion
LSP1	Deletion
MUC2	Deletion
MUC6	Deletion
NAP1L4	Deletion
SLC22A18	Deletion
SLC22A18AS	Deletion
POLR2L	Deletion
PSMD13	Deletion
RNH1	Deletion
MRPL23	Deletion
RPLP2	Deletion
SCT	Deletion
TALDO1	Deletion
TH	Deletion
TSPAN4	Deletion
TNNI2	Deletion
TNNT3	Deletion
PHLDA2	Deletion
RASSF7	Deletion
IFITM1	Deletion
BRSK2	Deletion
TSPAN32	Deletion
TSSC4	Deletion
IFITM3	Deletion
DEAF1	Deletion
IFITM2	Deletion
KCNQ10T1	Deletion
PKP3	Deletion
SIRT3	Deletion
C11orf21	Deletion
TRPM5	Deletion
IGF2AS	Deletion
BET1L	Deletion
CEND1	Deletion
CDHR5	Deletion
TOLLIP	Deletion

LRDD Deletion KCNQ1DN Deletion PNPLA2 Deletion PHRF1 Deletion SIGIRR Deletion RIC8A Deletion EPS8L2 Deletion CHID1 Deletion SLC25A22 Deletion ATHL1 Deletion PTDSS2 Deletion MOB2 Deletion ODF3 Deletion ODF3 Deletion CRC56 Deletion MRGPRE Deletion LOC143666 Deletion SCGB1C1 Deletion SCGB1C1 Deletion NLRP6 Deletion C11orf35 Deletion C11orf35 Deletion TMEM80 Deletion TMEM80 Deletion C11orf36 Deletion C11orf36 Deletion ANO9 Deletion C11orf36 Deletion KRTAP5-1 Deletion MRGPRG Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-2 Deletion KRTAP5-3 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-1 Deletion COL1001331 Deletion LOC1001335 Deletion		
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PHRF1 Deletion SIGIRR Deletion RIC8A Deletion EPS8L2 Deletion CHID1 Deletion SLC25A22 Deletion ATHL1 Deletion PTDSS2 Deletion SYT8 Deletion ODF3 Deletion CRRC56 Deletion MRGPRE Deletion SCGB1C1 Deletion SCGB1C1 Deletion C11orf35 Deletion C11orf35 Deletion C11orf36 Deletion TMEM80 Deletion ANO9 Deletion ANO9 Deletion ANO9 Deletion ANO9 Deletion C11orf36 Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-8 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-2 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-9 Deletion CRTAP5-9 Deletion	-	
SIGIRR Deletion RIC8A Deletion EPS8L2 Deletion CHID1 Deletion SLC25A22 Deletion ATHL1 Deletion PTDSS2 Deletion MOB2 Deletion SYT8 Deletion ODF3 Deletion CRRC56 Deletion LRRC56 Deletion LOC143666 Deletion SCGB1C1 Deletion SCGB1C1 Deletion C11orf35 Deletion C11orf35 Deletion EFCAB4A Deletion TMEM80 Deletion C11orf36 Deletion C11orf36 Deletion LOC338651 Deletion MRGPRE Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-9 Deletion KRTAP5-9 Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-2 Deletion KRTAP5-3 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-7 Deletion KRTAP5-9 Deletion LOC1001331 Deletion LOC1001331 Deletion LOC1001335 Deletion		
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EPS8L2 Deletion CHID1 Deletion SLC25A22 Deletion ATHL1 Deletion PTDSS2 Deletion MOB2 Deletion SYT8 Deletion ODF3 Deletion CSBPL5 Deletion LRRC56 Deletion LOC143666 Deletion CC1107635 Deletion KRP6 Deletion EFCAB4A Deletion TMEM80 Deletion C110rf36 Deletion C110rf36 Deletion C110rf36 Deletion C110rf36 Deletion CMRGPRE Deletion CT10rf36	SIGIRR	Deletion
CHID1DeletionSLC25A22DeletionATHL1DeletionPTDSS2DeletionMOB2DeletionSYT8DeletionODF3DeletionOSBPL5DeletionLRRC56DeletionLOC143666DeletionSCGB1C1DeletionNLRP6DeletionC11orf35DeletionEFCAB4ADeletionTMEM80DeletionC11orf36DeletionANO9DeletionLOC338651DeletionB4GALNT4DeletionPDDC1DeletionKRTAP5-1DeletionKRTAP5-3DeletionKRTAP5-4DeletionKRTAP5-5DeletionKRTAP5-6DeletionKRTAP5-7DeletionKRTAP5-8DeletionKRTAP5-9DeletionKRTAP5-1DeletionKRTAP5-2DeletionKRTAP5-3DeletionKRTAP5-4DeletionKRTAP5-5DeletionKRTAP5-6DeletionSNORA52DeletionSNORA54DeletionINS-IGF2DeletionMUC5BDeletionFAM99BDeletionLOC1001331DeletionLOC1001335Deletion	RIC8A	Deletion
SLC25A22 Deletion ATHL1 Deletion PTDSS2 Deletion MOB2 Deletion SYT8 Deletion ODF3 Deletion OSBPL5 Deletion LRRC56 Deletion MRGPRE Deletion LOC143666 Deletion SCGB1C1 Deletion NLRP6 Deletion C11orf35 Deletion FFCAB4A Deletion TMEM80 Deletion C11orf36 Deletion LOC338651 Deletion LOC338651 Deletion MRGPRG Deletion MRGPRG Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion	EPS8L2	Deletion
ATHL1 Deletion PTDSS2 Deletion MOB2 Deletion SYT8 Deletion ODF3 Deletion Deletion Deletion LRRC56 Deletion LOC143666 Deletion SCGB1C1 Deletion NLRP6 Deletion C11orf35 Deletion EFCAB4A Deletion TMEM80 Deletion C11orf36 Deletion ANO9 Deletion LOC338651 Deletion B4GALNT4 Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA52 Deletion INS-IGF2 Deletion LOC1001331 Deletion LOC1001335	CHID1	Deletion
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MOB2 Deletion SYT8 Deletion ODF3 Deletion OSBPL5 Deletion LRRC56 Deletion MRGPRE Deletion LOC143666 Deletion SCGB1C1 Deletion NLRP6 Deletion C11orf35 Deletion FFCAB4A Deletion TMEM80 Deletion C11orf36 Deletion ANO9 Deletion LOC338651 Deletion ANO9 Deletion MRGPRG Deletion KRTAP5-1 Deletion KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion KRTAP5-4 Deletion KRTAP5-5 Deletion KRTAP5-5 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion FAM99B Deletion LOC1001331 Deletion LOC1001331 Deletion	ATHL1	Deletion
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KRTAP5-1 Deletion KRTAP5-3 Deletion KRTAP5-4 Deletion IFITM5 Deletion FAM99A Deletion KRTAP5-5 Deletion KRTAP5-2 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion MUC5B Deletion FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion	PDDC1	Deletion
KRTAP5-3 Deletion KRTAP5-4 Deletion IFITM5 Deletion FAM99A Deletion KRTAP5-5 Deletion KRTAP5-2 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion MUC5B Deletion FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion	MRGPRG	Deletion
KRTAP5-4 Deletion IFITM5 Deletion FAM99A Deletion KRTAP5-5 Deletion KRTAP5-2 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion MUC5B Deletion FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion	KRTAP5-1	Deletion
KRTAP5-4 Deletion IFITM5 Deletion FAM99A Deletion KRTAP5-5 Deletion KRTAP5-2 Deletion KRTAP5-6 Deletion SNORA52 Deletion SNORA54 Deletion INS-IGF2 Deletion MUC5B Deletion FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion	KRTAP5-3	Deletion
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FAM99B Deletion LOC1001331 Deletion LOC1001335 Deletion		
LOC1001331 Deletion LOC1001335 Deletion		
LOC1001335 Deletion		
hsa-mir-126(Deletion	LOC1001335	Deletion
	hsa-mir-1260	Deletion

hsa-mir-625 Deletion ACTN1 Deletion ACYP1 Deletion ARG2 Deletion ZFP36L1 Deletion ENTPD5 Deletion DIO2 Deletion DLST Deletion EIF2S1 Deletion **ERH** Deletion **ESRRB** Deletion **FNTB** Deletion FOS Deletion FUT8 Deletion GPX2 Deletion GSTZ1 Deletion GTF2A1 Deletion LTBP2 Deletion MAX Deletion MAP3K9 Deletion ALDH6A1 Deletion PGF Deletion **PIGH** Deletion PSEN1 Deletion ABCD4 Deletion RAD51L1 Deletion SEL1L Deletion SFRS5 Deletion SLC8A3 Deletion SLC10A1 Deletion TGFB3 Deletion **TSHR** Deletion DPF3 Deletion **NUMB** Deletion ADAM21 Deletion ADAM20 Deletion DCAF5 Deletion ALKBH1 Deletion EIF2B2 Deletion PNMA1 Deletion NRXN3 Deletion SPTLC2 Deletion RGS6 Deletion **KIAA0247** Deletion **KIAA0317** Deletion MED6 Deletion

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GPHN	Deletion
VTI1B	Deletion
BATF	Deletion
NPC2	Deletion
AHSA1	Deletion
ACOT2	Deletion
TMED10	Deletion
C14orf1	Deletion
VASH1	Deletion
SNW1	Deletion
PCNX	Deletion
TTLL5	Deletion
ANGEL1	Deletion
ZFYVE26	Deletion
TTC9	Deletion
FLRT2	Deletion
SIPA1L1	Deletion
DCAF4	Deletion
PLEK2	Deletion
MLH3	Deletion
POMT2	Deletion
COQ6	Deletion
FCF1	Deletion
RDH11	Deletion
COX16	Deletion
ATP6V1D	Deletion
ZFYVE1	Deletion
EXD2	Deletion
C14orf115	Deletion
SYNJ2BP	Deletion
SLC39A9	Deletion
FLVCR2	Deletion
C14orf118	Deletion
YLPM1	Deletion
C14orf162	Deletion
ADCK1	Deletion
TMEM63C	Deletion
GALNTL1	Deletion
PLEKHH1	Deletion
ZNF410	Deletion
NGB	Deletion
RBM25	Deletion
VIPAR	Deletion
SMOC1	Deletion
C14orf4	Deletion
MPP5	Deletion
•	

FAM164C	Deletion
C14orf169	Deletion
C14orf45	Deletion
C14orf156	Deletion
DNAL1	Deletion
RPS6KL1	Deletion
STON2	Deletion
KIAA1737	Deletion
PAPLN	Deletion
CHURC1	Deletion
C14orf43	Deletion
LIN52	Deletion
NEK9	Deletion
C14orf179	Deletion
C14orf148	Deletion
JDP2	Deletion
ISCA2	Deletion
ACOT4	Deletion
RDH12	Deletion
ADAM21P1	Deletion
LOC145474	Deletion
PTGR2	Deletion
FAM161B	Deletion
C14orf166B	Deletion
ISM2 C14orf145	Deletion Deletion
FAM71D	Deletion
TMEM229B	Deletion
C14orf174	Deletion
PROX2	Deletion
ZDHHC22	Deletion
TMED8	Deletion
C14orf178	Deletion
SNORD56B	Deletion
VSX2	Deletion
RAB15	Deletion
HEATR4	Deletion
C14orf181	Deletion
UPF0639	Deletion
C14orf53	Deletion
ACOT1	Deletion
ACOT6	Deletion
LOC645431	Deletion
TMEM90A	Deletion
SNORA79	Deletion
hsa-mir-4315	Deletion

hsa-mir-2117 Deletion **ACLY** Deletion AOC2 Deletion ARL4D Deletion ATP6V0A1 Deletion BRCA1 Deletion FMNL1 Deletion **CNP** Deletion CRHR1 Deletion DHX8 Deletion DUSP3 Deletion ETV4 Deletion EZH1 Deletion Deletion FZD2 G6PC Deletion KAT2A Deletion **GFAP** Deletion CCR10 Deletion GRN Deletion **HCRT** Deletion HSD17B1 Deletion IFI35 Deletion ITGA2B Deletion NBR1 Deletion **MAPT** Deletion ADAM11 Deletion MEOX1 Deletion MPP2 Deletion MPP3 Deletion **NAGLU** Deletion NMT1 Deletion NSF Deletion PPY Deletion PYY Deletion RAB5C Deletion RPL27 Deletion SLC4A1 Deletion STAT3 Deletion STAT5A Deletion STAT5B Deletion MLX Deletion DNAJC7 Deletion TUBG1 Deletion **UBTF** Deletion RND2 Deletion CNTNAP1 Deletion

AOC3	Deletion
BECN1	Deletion
MAP3K14	Deletion
EFTUD2	Deletion
PLEKHM1	Deletion
LRRC37A	Deletion
HDAC5	Deletion
GJC1	Deletion
PSME3	Deletion
NBR2	Deletion
RAMP2	Deletion
VAT1	Deletion
SC65	Deletion
HEXIM1	Deletion
C1QL1	Deletion
RUNDC3A	Deletion
GPATCH8	Deletion
KCNH4	Deletion
C17orf88	Deletion
TUBG2	Deletion
NKIRAS2	Deletion
CCDC56	Deletion
PSMC3IP	Deletion
SOST	Deletion
ARL17A 513	Deletion
CLCOFACO	
SLC25A39	Deletion
HIGD1B	Deletion Deletion
HIGD1B	Deletion
HIGD1B LRRC37A4	Deletion Deletion
HIGD1B LRRC37A4 KLHL11	Deletion Deletion Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3	Deletion Deletion Deletion Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10	Deletion Deletion Deletion Deletion Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4	Deletion Deletion Deletion Deletion Deletion Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53	Deletion Deletion Deletion Deletion Deletion Deletion Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY AARSD1	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY AARSD1 TTC25	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY AARSD1 TTC25 VPS25	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY AARSD1 TTC25 VPS25 TMEM101	Deletion
HIGD1B LRRC37A4 KLHL11 ATXN7L3 FKBP10 WNK4 C17orf53 TMUB2 DHX58 ACBD4 DCAKD PLEKHH3 DBF4B COASY AARSD1 TTC25 VPS25	Deletion

G6PC3	Deletion
ASB16	Deletion
HSPB9	Deletion
PLCD3	Deletion
TMEM106A	Deletion
NT5C3L	Deletion
C17orf46	Deletion
HEXIM2	Deletion
LSM12	Deletion
CCDC43	Deletion
CNTD1	Deletion
CD300LG	Deletion
KIF18B	Deletion
RUNDC1	Deletion
C17orf69	Deletion
NAGS	Deletion
FAM134C	Deletion
IMP5	Deletion
SH3D20	Deletion
ARHGAP27	Deletion
STH	Deletion
KIAA1267	Deletion
C17orf105	Deletion
FAM171A2	Deletion
C17orf104	
	Deletion
PTRF	Deletion
KLHL10	Deletion
C17orf65	Deletion
LOC388387	Deletion
CCDC103	Deletion
MGC57346	Deletion
LRRC37A2	Deletion
ARL17B	Deletion
LOC644172	Deletion
LOC1001289	Deletion
LOC1001301	Deletion
LOC1001305	
LOC1001339	
LOC1001909	
BPHL	Deletion
SERPINB1	Deletion
F13A1	Deletion
FOXF2	Deletion
FOXC1	Deletion
GMDS	Deletion
IRF4	Deletion

NQO2	Deletion
SERPINB6	Deletion
SERPINB9	Deletion
RREB1	Deletion
SSR1	Deletion
TUBB2A	Deletion
RIPK1	Deletion
PRPF4B	Deletion
CDYL	Deletion
LY86	Deletion
PECI	Deletion
FARS2	Deletion
RPP40	Deletion
FAM50B	Deletion
NRN1	Deletion
EXOC2	Deletion
WRNIP1	Deletion
DUSP22	Deletion
LYRM4	Deletion
SLC22A23	Deletion
FOXQ1	Deletion
HUS1B	Deletion
C6orf195	Deletion
C6orf145	Deletion
C6orf146	Deletion
LOC285768	Deletion
LOC285780	Deletion
MYLK4	Deletion
TUBB2B	Deletion
FAM136B	Deletion
PSMG4	Deletion
DKFZP686I15	
C6orf201	Deletion
PPP1R3G	Deletion
hsa-mir-378c	
hsa-mir-4297	
hsa-mir-202	Deletion
ADAM8	Deletion
BNIP3	Deletion
CYP2E1	Deletion
ECHS1	Deletion
INPP5A	Deletion
MGMT	Deletion
MKI67	Deletion
PTPRE	Deletion
UTF1	Deletion

61.51/6	5 1
GLRX3	Deletion
DPYSL4	Deletion
TUBGCP2	Deletion
DUX4 22947	
VENTX	Deletion
CALY	Deletion
PPP2R2D	Deletion
LRRC27	Deletion
GPR123	Deletion
NKX6-2	Deletion
KNDC1	Deletion
MTG1	Deletion
SYCE1	Deletion
PRAP1	Deletion
ZNF511	Deletion
CLRN3	Deletion
C10orf91	Deletion
PWWP2B	Deletion
PAOX	Deletion
EBF3	Deletion
C10orf93	Deletion
TCERG1L	Deletion
C10orf125	Deletion
JAKMIP3	Deletion
STK32C	Deletion
FOXI2	Deletion
FRG2B	Deletion
SPRN	Deletion
NPS	Deletion
LOC619207	Deletion
LOC653544	
LOC728410	Deletion
CYB5A	Deletion
GALR1	Deletion
MBP	Deletion
NFATC1	Deletion
ZNF236	Deletion
CTDP1	Deletion
ZNF516	Deletion
TSHZ1	Deletion
TXNL4A	Deletion
ADNP2	Deletion
KCNG2	Deletion
SALL3	Deletion
C18orf55	Deletion
ZNF407	Deletion

CNDP2	Deletion
C18orf22	Deletion
PQLC1	Deletion
NETO1	Deletion
PARD6G	Deletion
CNDP1	Deletion
FAM69C	Deletion
CBLN2	Deletion
FBXO15	Deletion
ZADH2	Deletion
C18orf62	Deletion
LOC284276	Deletion
ATP9B	Deletion
LOC400657	Deletion
HSBP1L1	Deletion
_	
LOC1001305	
FOXO3	Deletion
NR2E1	Deletion
SNX3	Deletion
CD164	Deletion
SEC63	Deletion
SESN1	Deletion
OSTM1	Deletion
ARMC2	Deletion
LACE1	Deletion
SCML4	Deletion
C6orf182	Deletion
PPIL6	Deletion
hsa-mir-339	Deletion
GNA12	Deletion
GPER	Deletion
LFNG	Deletion
NUDT1	Deletion
PDGFA	Deletion
PRKAR1B	Deletion
MAFK	Deletion
MAD1L1	Deletion
EIF3B	Deletion
KIAA0415	Deletion
ADAP1	Deletion
IQCE	Deletion
SUN1	Deletion
INTS1	Deletion
SNX8	Deletion
FTSJ2	Deletion
GET4	Deletion

CYP2W1	Deletion
HEATR2	Deletion
CHST12	Deletion
RADIL	Deletion
PAPOLB	Deletion
FAM20C	Deletion
MICALL2	Deletion
TTYH3	Deletion
PSMG3	Deletion
C7orf50	Deletion
CARD11	Deletion
ZFAND2A	Deletion
COX19	Deletion
KIAA1908	Deletion
GPR146	Deletion
AMZ1	Deletion
TMEM184A	Deletion
C7orf27	Deletion
	Deletion
SDK1	
FOXK1	Deletion
MMD2	Deletion
TFAMP1	Deletion
UNCX	Deletion
ELFN1	Deletion
RNF216L	Deletion
hsa-mir-4256	
hsa-mir-760	
hsa-mir-320k	Deletion
hsa-mir-553	Deletion
hsa-mir-137	Deletion
hsa-mir-197	Deletion
ABCA4	Deletion
ADORA3	Deletion
AGL	Deletion
ALX3	Deletion
AMPD1	Deletion
AMPD2	Deletion
AMY1A 276	Deletion
AMY2A	Deletion
AMY2B	Deletion
RHOC	Deletion
ATP1A1	Deletion
ATP5F1	Deletion
BRDT	Deletion
CAPZA1	Deletion
CASQ2	Deletion
داعرد	Detetion

CD2	Deletion
CD53	Deletion
CD58	Deletion
CHI3L2	Deletion
CLCA1	Deletion
CNN3	Deletion
COL11A1	Deletion
CSF1	Deletion
CTBS	Deletion
DBT	Deletion
DPYD	Deletion
DR1	Deletion
S1PR1	Deletion
CELSR2	Deletion
EXTL2	Deletion
F3	Deletion
GBP1	Deletion
GBP2	Deletion
GBP3	Deletion
GFI1	Deletion
GCLM	Deletion
GNAI3	Deletion
GNAT2	Deletion
GNG5	Deletion
GSTM1	Deletion
GSTM2	Deletion
GSTM3	Deletion
GSTM4	Deletion
GSTM5	Deletion
GTF2B	Deletion
IGSF3	Deletion
CYR61	Deletion
KCNA2	Deletion
KCNA3	Deletion
KCNA10	Deletion
KCNC4	Deletion
KCNC4 KCND3	Deletion
MOV10	Deletion
NGF	Deletion
NHLH2	
NRAS	Deletion
	Deletion
OVGP1	Deletion
PRKACB	Deletion
PKN2	Deletion
PSMA5	Deletion
ABCD3	Deletion

RAP1A	Deletion
SNORD21	Deletion
RPL5	Deletion
SORT1	Deletion
SARS	Deletion
SLC16A1	Deletion
STXBP3	Deletion
SYCP1	Deletion
TAF13	Deletion
TGFBR3	Deletion
TSHB	Deletion
VCAM1	Deletion
WNT2B	Deletion
CSDE1	Deletion
EVI5	Deletion
CDC7	Deletion
BCAR3	Deletion
LMO4	Deletion
CDC14A	Deletion
RTCD1	Deletion
BCL10	Deletion
SLC16A4	Deletion
41167	Deletion
ARHGAP29	Dalation
AKITGAPZ9	Deletion
CLCA3P	Deletion
CLCA3P CLCA2	Deletion Deletion
CLCA3P CLCA2 HS2ST1	Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2	Deletion Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4	Deletion Deletion Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2	Deletion Deletion Deletion Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2	Deletion Deletion Deletion Deletion Deletion Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1	Deletion Deletion Deletion Deletion Deletion Deletion Deletion Deletion Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20 CLCA4 MTF2	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20 CLCA4 MTF2 NTNG1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20 CLCA4 MTF2 NTNG1 WDR47	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20 CLCA4 MTF2 NTNG1 WDR47 CLCC1	Deletion
CLCA3P CLCA2 HS2ST1 LRIG2 LPPR4 TSPAN2 BCAS2 CEPT1 VAV3 HBXIP AP4B1 PHTF1 AHCYL1 GLMN DDX20 CLCA4 MTF2 NTNG1 WDR47	Deletion

Deletion
Deletion
Deletion
Deletion

DENND2D	Deletion
RPF1	Deletion
SIKE1	Deletion
VANGL1	Deletion
GPR61	Deletion
SYDE2	Deletion
ZNF644	Deletion
LRRC8C	Deletion
PROK1	Deletion
PSRC1	Deletion
C1orf203	Deletion
FAM40A	Deletion
C1orf59	Deletion
GBP4	Deletion
GBP5	Deletion
SSX2IP	Deletion
OLFM3	Deletion
WDR63	Deletion
C1orf161	Deletion
SLC44A3	Deletion
ATXN7L2	Deletion
C1orf194	Deletion
LRRC39	Deletion
DRAM2	Deletion
C1orf88	Deletion
C1orf162	Deletion
SYT6	Deletion
SAMD13	Deletion
C1orf52	Deletion
TMEM56	Deletion
NBPF4	Deletion
SLC30A7	Deletion
LOC149620	Deletion
DENND2C	Deletion
GBP6	Deletion
LPPR5	Deletion
FNDC7	Deletion
SASS6	Deletion
HFM1	Deletion
UBL4B	Deletion
ALG14	Deletion
HIPK1	Deletion
AFARP1	Deletion
EPHX4	Deletion
AKNAD1	Deletion
MCOLN2	Deletion

COL24A1	Deletion
MAGI3	Deletion
FAM19A3	Deletion
FAM102B	Deletion
SYPL2	Deletion
CYB561D1	Deletion
ZNF326	Deletion
BTBD8	Deletion
PPM1J	Deletion
LOC339524	Deletion
CCDC18	Deletion
MYBPHL	Deletion
BARHL2	Deletion
HSP90B3P	Deletion
GBP7	Deletion
C1orf146	Deletion
FAM69A	Deletion
SLC6A17	Deletion
UOX	Deletion
FRRS1	Deletion
LOC400759	Deletion
C1orf180	Deletion
BCL2L15	Deletion
GEMIN8P4	Deletion
RBMXL1	Deletion
CYMP	Deletion
LOC648740	Deletion
NBPF6	Deletion
SCARNA2	Deletion
TUBA3C	Deletion
ZMYM2	Deletion
ZMYM5	Deletion
MPHOSPH8	Deletion
PSPC1	Deletion
TPTE2	Deletion
DKFZp686A1	Deletion
LOC284232	Deletion
LOC348021	Deletion
LOC1001019	
hsa-mir-4304	
hsa-mir-1178	
ACADS	Deletion
BCL7A	Deletion
SCARB1	Deletion
COX6A1	Deletion
EIF2B1	Deletion

STX2	Deletion
GOLGA3	Deletion
GTF2H3	Deletion
HPD	Deletion
MMP17	Deletion
MSI1	Deletion
P2RX4	Deletion
P2RX7	Deletion
PEBP1	Deletion
PLA2G1B	Deletion
POLE	Deletion
PRKAB1	Deletion
PSMD9	Deletion
PXMP2	Deletion
PXN	Deletion
RAN	Deletion
RFC5	Deletion
RPLP0	Deletion
CLIP1	Deletion
SFRS8	Deletion
HNF1A	Deletion
UBC	Deletion
ZNF10	Deletion
ZNF26	Deletion
ZNF84	Deletion
ZNF140	Deletion
CDK2AP1	Deletion
ULK1	Deletion
DENR	Deletion
OASL	Deletion
DYNLL1	Deletion
SFRS9	Deletion
GPR109B	Deletion
HIP1R	Deletion
PIWIL1	Deletion
CABP1	Deletion
NCOR2	Deletion
KNTC1	Deletion
MLEC	Deletion
RNF10	Deletion
MPHOSPH9	Deletion
CAMKK2	Deletion
ZNF268	Deletion
TMED2	Deletion
GCN1L1	Deletion
RAB35	Deletion

SNRNP35	Deletion
CIT	Deletion
FZD10	Deletion
MLXIP	Deletion
P2RX2	Deletion
SETD1B	Deletion
ANKLE2	Deletion
SIRT4	Deletion
ABCB9	Deletion
RIMBP2	Deletion
ATP6V0A2	Deletion
HSPB8	Deletion
GPR81	Deletion
GALNT9	Deletion
ARL6IP4	Deletion
TAOK3	Deletion
POP5	Deletion
ANAPC5	Deletion
TRIAP1	Deletion
RHOF	Deletion
VSIG10	Deletion
SBNO1	Deletion
ZCCHC8	Deletion
CHFR	Deletion
WSB2	Deletion
DIABLO	Deletion
PITPNM2	Deletion
EP400	Deletion
DHX37	Deletion
FBRSL1	Deletion
DDX55	Deletion
SUDS3	Deletion
C12orf43	Deletion
VPS33A	Deletion
RSRC2	Deletion
AACS	Deletion
NOC4L	Deletion
B3GNT4	Deletion
OGFOD2	Deletion
VPS37B	Deletion
TCTN2	Deletion
RNF34	Deletion
CCDC92	Deletion
PUS1	Deletion
COQ5	Deletion
SRRM4	Deletion
-	

CCDC62	Deletion
KDM2B	Deletion
UNC119B	Deletion
ORAI1	Deletion
C12orf65	Deletion
TMEM132C	Deletion
CCDC64	Deletion
MGC16384	Deletion
TMEM132B	Deletion
LOC116437	Deletion
TMEM132D	Deletion
SLC15A4	Deletion
SPPL3	Deletion
BRI3BP	Deletion
FAM101A	Deletion
ZNF664	Deletion
TMEM120B	Deletion
WDR66	Deletion
GLT1D1	Deletion
LOC144742	Deletion
CCDC60	Deletion
PGAM5	Deletion
RILPL2	Deletion
DNAH10	Deletion
LRRC43	Deletion
GPR133	Deletion
MORN3	Deletion
NME2P1	Deletion
GATC	Deletion
C12orf27	Deletion
DDX51	Deletion
GPR109A	Deletion
LOC338799	Deletion
EP400NL 34	Deletion
RILPL1	Deletion
IL31	Deletion
TMEM233	Deletion
SETD8	Deletion
SNORA49	Deletion
LOC1001285	Deletion
LOC1001302	Deletion
LOC1001909	Deletion
ZNF605	Deletion
EFNA5	Deletion
RAB9BP1	Deletion
PTPRD	Deletion
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CSNK2A1	Deletion
SOX12	Deletion
TCF15	Deletion
RBCK1	Deletion
TRIB3	Deletion
NRSN2	Deletion
DEFB126	Deletion
ZCCHC3	Deletion
SCRT2	Deletion
C20orf54	Deletion
TBC1D20	Deletion
C20orf96	Deletion
SRXN1	Deletion
DEFB127	Deletion
DEFB129	Deletion
DEFB125	Deletion
DEFB128	Deletion
DEFB132	Deletion
hsa-mir-1826	Deletion
DNAJA2	Deletion
ZNF267	Deletion
ORC6L	Deletion
VPS35	Deletion
SHCBP1	Deletion
GPT2	Deletion
MYLK3	Deletion
ANKRD26P1	Deletion
LOC146481	Deletion
LOC283914	Deletion
SLC6A10P	Deletion
C16orf87	Deletion
HERC2P4	Deletion
UBE2MP1	Deletion
TP53TG3B 7	Deletion
hsa-mir-4310	Deletion
hsa-mir-1282	Deletion
hsa-mir-147k	Deletion
hsa-mir-627	Deletion
hsa-mir-626	Deletion
B2M	Deletion
BUB1B	Deletion
CAPN3	Deletion
CKMT1B	Deletion
CYP19A1	Deletion
DUT	Deletion
EPB42	Deletion
LI D74	Detetion

FBN1	Deletion
FGF7	Deletion
GABPB1	Deletion
GALK2	Deletion
GANC	Deletion
GATM	Deletion
GCHFR	Deletion
PDIA3	Deletion
HDC	Deletion
ITPKA	Deletion
IVD	Deletion
LTK	Deletion
MAP1A	Deletion
MEIS2	Deletion
MFAP1	Deletion
PLCB2	Deletion
MAPK6	Deletion
RAD51	Deletion
SLC12A1	Deletion
SORD	Deletion
SPINT1	Deletion
SRP14	Deletion
THBS1	Deletion
TP53BP1	Deletion
TYRO3	Deletion
SLC30A4	Deletion
EIF3J	Deletion
JMJD7-PLA20	
SNAP23	Deletion
USP8	Deletion
SLC28A2	Deletion
COPS2	Deletion
TGM5	Deletion
PPIP5K1	Deletion
SECISBP2L	Deletion
LCMT2	Deletion
BCL2L10	Deletion
RASGRP1	Deletion
SERF2	Deletion
GNB5	Deletion
SLC27A2	Deletion
GPR176	Deletion
СНР	Deletion
OIP5	Deletion
BAHD1	Deletion
CEP152	Deletion
CLI 1JZ	PCICHOII

MAPKBP1 Deletion RTF1 Deletion MGA Deletion DMXL2 Deletion VPS39 Deletion AP4E1 Deletion CCNDBP1 Deletion EID1 Deletion C15orf63 Deletion TMEM87A Deletion RPAP1 Deletion **PLDN** Deletion RPUSD2 Deletion TUBGCP4 Deletion SCG3 Deletion TMOD3 Deletion TMOD2 Deletion EHD4 Deletion DUOX2 Deletion MYEF2 Deletion NDUFAF1 Deletion NUSAP1 Deletion SPTBN5 Deletion CTDSPL2 Deletion DUOX1 Deletion DLL4 Deletion **INO80** Deletion TRPM7 Deletion PPP1R14D Deletion **ZNF770** Deletion FLJ10038 Deletion HAUS2 Deletion FAM82A2 Deletion DNAJC17 Deletion PAK6 Deletion DTWD1 Deletion CASC5 Deletion VPS18 Deletion **SQRDL** Deletion **ZFP106** Deletion SPATA5L1 Deletion CHAC1 Deletion ATP8B4 Deletion WDR76 Deletion TMEM62 Deletion SEMA6D Deletion

SPG11	Deletion
ELL3	Deletion
C15orf48	Deletion
C15orf41	Deletion
SPPL2A	Deletion
ZFYVE19	Deletion
FRMD5	Deletion
DISP2	Deletion
ATPBD4	Deletion
C15orf57	Deletion
C15orf23	Deletion
BMF	Deletion
SHE	Deletion
DUOXA1	Deletion
CHST14	Deletion
CASC4	Deletion
TGM7	Deletion
CATSPER2	Deletion
LEO1	Deletion
PLA2G4E	Deletion
TRIM69	Deletion
C15orf43	Deletion
LOC145845	Deletion
TMCO5A	Deletion
ZSCAN29	Deletion
TTBK2	Deletion
CDAN1	Deletion
STRC	Deletion
CSNK1A1P	
SPRED1	Deletion Deletion
ADAL EVD1	Deletion
EXD1	Deletion
FSIP1	Deletion
RHOV	Deletion
C15orf33	Deletion
UBR1	Deletion
PATL2	Deletion
PLA2G4F	Deletion
LRRC57	Deletion
LYSMD2	Deletion
C15orf21	Deletion
SLC24A5	Deletion
FAM98B	Deletion
PLA2G4D	Deletion
GLDN	Deletion
MRPL42P5	Deletion

USP50	Deletion
C15orf52	Deletion
TNFAIP8L3	Deletion
SHC4	Deletion
CTXN2	Deletion
C15orf53	Deletion
C15orf54	Deletion
DUOXA2	Deletion
EIF2AK4	Deletion
CATSPER2P1	Deletion
CKMT1A	Deletion
SERINC4	Deletion
C15orf62	Deletion
C15orf56	Deletion
PHGR1	Deletion
LOC723972	Deletion
LOC728758	Deletion
LOC729082	Deletion
LOC1001293	
LOC1001233	
hsa-mir-614	Deletion
hsa-mir-613	
ARHGDIB	Deletion
ART4	Deletion
CDKN1B	Deletion
CREBL2	Deletion
EMP1	
	Deletion
EPS8	Deletion
ETV6	Deletion
GPR19	Deletion
GRIN2B	Deletion
GUCY2C	Deletion
LRP6	Deletion
MGP	Deletion
MGST1	Deletion
PDE6H	Deletion
PRB1	Deletion
PRB3	Deletion
PRB4	Deletion
PRH1	Deletion
PRH2	Deletion
PTPRO	Deletion
CSDA	Deletion
GPRC5A	Deletion
STRAP	Deletion
PRR4	Deletion

TAS2R9	Deletion
TAS2R8	Deletion
TAS2R7	Deletion
TAS2R13	Deletion
TAS2R10	Deletion
TAS2R14	Deletion
HEBP1	Deletion
DERA	Deletion
DDX47	Deletion
WBP11	Deletion
MANSC1	Deletion
MAGOHB	Deletion
STYK1	Deletion
GPRC5D	Deletion
ATF7IP	Deletion
H2AFJ	Deletion
LMO3	Deletion
KIAA1467	Deletion
BCL2L14	Deletion
RERGL	Deletion
PLBD1	Deletion
DUSP16	Deletion
APOLD1	Deletion
GSG1	Deletion
RERG	Deletion
HTR7P1	Deletion
LOH12CR1	Deletion
HIST4H4	Deletion
ERP27	Deletion
C12orf60	Deletion
TAS2R43	Deletion
TAS2R31	Deletion
TAS2R31	Deletion
TAS2R40	Deletion
TAS2R30	Deletion
TAS2R19	Deletion
TAS2R50	Deletion
C12orf36	Deletion
TAS2R42	
_	Deletion
RPL13AP20	Deletion
C12orf69	Deletion
LOH12CR2	Deletion
PRB2	Deletion
hsa-mir-1299	
PGM5	Deletion
ZNF658	Deletion

CNTNAP3 Deletion C9orf122 Deletion CBWD5 Deletion FOXD4L3 Deletion AQP7P1 Deletion KGFLP1 Deletion FAM75A6 Deletion MGC21881 Deletion FAM74A1 Deletion
CBWD5 Deletion FOXD4L3 Deletion AQP7P1 Deletion KGFLP1 Deletion FAM75A6 Deletion MGC21881 Deletion
FOXD4L3 Deletion AQP7P1 Deletion KGFLP1 Deletion FAM75A6 Deletion MGC21881 Deletion
AQP7P1 Deletion KGFLP1 Deletion FAM75A6 Deletion MGC21881 Deletion
KGFLP1 Deletion FAM75A6 Deletion MGC21881 Deletion
FAM75A6 Deletion MGC21881 Deletion
MGC21881 Deletion
FAM7/A1 Deletion
FAM74A4 Deletion
LOC440896 Deletion
ANKRD20A3 Deletion
AQP7P3 Deletion
LOC442421 Deletion
CBWD3 445! Deletion
FAM27A Deletion
LOC572558 Deletion
PGM5P2 Deletion
FAM75A2 64 Deletion
LOC642929 Deletion
CBWD6 Deletion
FOXD4L6 Deletion
FOXD4L5 Deletion
LOC653501 Deletion
KGFLP2 Deletion
FAM75A3 Deletion
FAM75A5 72 Deletion
FAM74A3 Deletion
ANKRD20A4 Deletion
? 728788 Deletion
FOXD4L2 10 Deletion
FAM27C Deletion
FAM95B1 1(Deletion
FAM27B Deletion
LOC1001339 Deletion
hsa-mir-663t Deletion
hsa-mir-128- Deletion
ACVR2A Deletion
BIN1 Deletion
CACNB4 Deletion
CCNT2 Deletion
DARS Deletion
ERCC3 Deletion
GPR17 Deletion
GPR39 Deletion

GYPC Deletion **HNMT** Deletion KCNJ3 Deletion KIF5C Deletion LCT Deletion MCM6 Deletion MGAT5 Deletion MYO7B Deletion NEB Deletion NR4A2 Deletion ORC4L Deletion POLR2D Deletion **PROC** Deletion **TNFAIP6** Deletion CXCR4 Deletion **KYNU** Deletion NMI Deletion HS6ST1 Deletion ZEB2 Deletion STAM2 Deletion MAP3K2 Deletion NXPH2 Deletion RAB3GAP1 Deletion UBXN4 Deletion R3HDM1 Deletion EPC2 Deletion ARL5A Deletion PTPN18 Deletion **MMADHC** Deletion C2orf27A Deletion ARHGEF4 Deletion LRP1B Deletion PLEKHB2 Deletion RIF1 Deletion WDR33 Deletion SMPD4 Deletion PRPF40A Deletion IWS1 Deletion LIMS2 Deletion MBD5 Deletion ARHGAP15 Deletion **RPRM** Deletion UGGT1 Deletion **SAP130** Deletion GTDC1 Deletion FAM128B Deletion

YSK4	Deletion
THSD7B	Deletion
TMEM163	Deletion
AMMECR1L	Deletion
ZRANB3	Deletion
RAB6C	Deletion
CCDC115	Deletion
SFT2D3	Deletion
CCDC74A	Deletion
CCDC74B	Deletion
IMP4	Deletion
TUBA3E	Deletion
TUBA3D	Deletion
FMNL2	Deletion
GALNT13	Deletion
LYPD1	Deletion
CNTNAP5	Deletion
ACMSD	Deletion
FAM168B	Deletion
LYPD6	Deletion
LYPD6B	Deletion
LOC150527	Deletion
LOC150776	Deletion
LOC150786	Deletion
LOC151162	Deletion
ARL6IP6	Deletion
FAM123C	Deletion
SPOPL	Deletion
CYP27C1	Deletion
NCKAP5	Deletion
GPR148	Deletion
RBM43	Deletion
LOC389033	Deletion
LOC401010	Deletion
C2orf27B	Deletion
LOC440905	Deletion
POTEE	Deletion
NCRNA00164	
CFC1B 6532	
FAM128A	Deletion
POTEF	Deletion
PABPC1P2	Deletion
C2orf14	Deletion
ACCN1	Deletion
AP2B1	Deletion
LIG3	Deletion

PEX12	Deletion
RAD51L3	Deletion
CCL1	Deletion
CCL2	Deletion
CCL7	Deletion
CCL8	Deletion
CCL11	Deletion
CCL13	Deletion
ССТ6В	Deletion
NLE1	Deletion
FNDC8	Deletion
SLFN12	Deletion
ZNF830	Deletion
SLFN11	Deletion
RASL10B	Deletion
RFFL	Deletion
TMEM132E	Deletion
SLFN13	Deletion
AMAC1	Deletion
UNC45B	Deletion
SLFN5	Deletion
SLFN12L	Deletion
SLFN14	Deletion
C17orf102	Deletion
SNORD7	Deletion
hsa-mir-1237	Deletion
hsa-mir-612	Deletion
hsa-mir-194-	Deletion
hsa-mir-192	Deletion
ARL2	Deletion
BAD	Deletion
C11orf2	Deletion
MRPL49	Deletion
ZNHIT2	Deletion
CAPN1	Deletion
CFL1	Deletion
CTSW	Deletion
ESRRA	Deletion
FAU	Deletion
FKBP2	Deletion
DNAJC4	Deletion
LTBP3	Deletion
MEN1	
	Deletion
MAP3K11	Deletion
OVOL1	Deletion
PLCB3	Deletion

PPP2R5B Deletion **PYGM** Deletion MAP4K2 Deletion **RELA** Deletion DPF2 Deletion SIPA1 Deletion TM7SF2 Deletion **VEGFB** Deletion SF1 Deletion ZFPL1 Deletion FOSL1 Deletion RPS6KA4 Deletion **FIBP** Deletion NRXN2 Deletion NAALADL1 Deletion KCNK7 Deletion RASGRP2 Deletion CDC42EP2 Deletion KAT5 Deletion SSSCA1 Deletion EHD1 Deletion STIP1 Deletion CCDC85B Deletion ATG2A Deletion FAM89B Deletion POLA2 Deletion PRDX5 Deletion C11orf20 Deletion PPP1R14B Deletion SAC3D1 Deletion SNX15 Deletion EFEMP2 Deletion KCNK4 Deletion TRMT112 Deletion CDC42BPG Deletion SLC22A11 Deletion **GPR137** Deletion SCYL1 Deletion **MUS81** Deletion FERMT3 Deletion TRPT1 Deletion FRMD8 Deletion RNASEH2C Deletion NUDT22 Deletion SYVN1 Deletion DKFZp761E1! Deletion

CDCAE	Dalatian
CDCA5	Deletion
BATF2	Deletion
SLC22A12	Deletion
GPHA2	Deletion
TIGD3	Deletion
EHBP1L1	Deletion
SNX32	Deletion
C11orf85	Deletion
SLC25A45	Deletion
NEAT1	Deletion
CCDC88B	Deletion
MALAT1	Deletion
SPDYC	Deletion
PCNXL3	Deletion
SLC22A20	Deletion
FNTA	Deletion
SGK196	Deletion
HGSNAT	Deletion
POTEA	Deletion
hsa-mir-4273	
hsa-mir-4272	
hsa-mir-3136	
hsa-mir-1324	
hsa-mir-1284	
hsa-mir-135a	
hsa-let-7g	Deletion
ALAS1	Deletion
ARF4	Deletion
C3orf51	Deletion
CACNA1D	Deletion
DNASE1L3	Deletion
FHIT	Deletion
FLNB	Deletion
GBE1	Deletion
GPR27	Deletion
HTR1F	Deletion
ITIH1	Deletion
ITIH3	Deletion
ITIH4	Deletion
MITF	Deletion
CNTN3	Deletion
PDHB	Deletion
POU1F1	Deletion
PRKCD	Deletion
PTPRG	Deletion
ROBO1	Deletion

ROBO2 Deletion ATXN7 Deletion NEK4 Deletion TKT Deletion TMF1 Deletion TNNC1 Deletion WNT5A Deletion **SLMAP** Deletion ACOX2 Deletion BAP1 Deletion CGGBP1 Deletion **CADPS** Deletion SUCLG2 Deletion HESX1 Deletion UBA3 Deletion MAGI1 Deletion PSMD6 Deletion ARL6IP5 Deletion RPP14 Deletion FAM107A Deletion **NISCH** Deletion TWF2 Deletion PDZRN3 Deletion FRMD4B Deletion STAB1 Deletion C3orf63 Deletion **RYBP** Deletion CHMP2B Deletion DNAH1 Deletion LRIG1 Deletion ERC2 Deletion APPL1 Deletion GNL3 Deletion FOXP1 Deletion SPCS1 Deletion ARHGEF3 Deletion SFMBT1 Deletion PHF7 Deletion TLR9 Deletion IL17RD Deletion **PXK** Deletion FEZF2 Deletion FLJ10213 Deletion SHQ1 Deletion PBRM1 Deletion **ZNF654** Deletion CHDH Deletion IL17RB Deletion CACNA2D3 Deletion DCP1A Deletion GLT8D1 Deletion LMOD3 Deletion SEMA3G Deletion ADAMTS9 Deletion ABHD6 Deletion LRTM1 Deletion C3orf14 Deletion SELK Deletion PROK2 Deletion NT5DC2 Deletion THOC7 Deletion WDR82 Deletion ID2B Deletion KBTBD8 Deletion RFT1 Deletion ACTR8 Deletion SLC25A26 Deletion FAM3D Deletion **GLYCTK** Deletion PPM1M Deletion C3orf49 Deletion **SNTN** Deletion **SYNPR** Deletion ASB14 Deletion FAM19A4 Deletion PPP4R2 Deletion PRICKLE2 Deletion C3orf67 Deletion KCTD6 Deletion DNAH12 Deletion PDE12 Deletion FAM116A Deletion CADM2 Deletion C3orf64 Deletion C3orf38 Deletion CCDC66 Deletion LOC285401 Deletion EIF4E3 Deletion SPATA12 Deletion **TMEM110** Deletion MUSTN1 Deletion VGLL3 Deletion

FAM19A1	Deletion
LOC440957	Deletion
SNORD19	Deletion
FAM86D	Deletion
SNORD69	Deletion
GXYLT2	Deletion
HESRG	Deletion
SNORD19B	Deletion
ZNF717	Deletion
FRG2C	Deletion
hsa-mir-4288	Deletion
hsa-mir-4287	
hsa-mir-3148	
hsa-mir-548h	
ADRA1A	Deletion
BNIP3L	Deletion
CHRNA2	Deletion
CLU	Deletion
DPYSL2	Deletion
DUSP4	Deletion
EGR3	Deletion
EPHX2	Deletion
EXTL3	
	Deletion
PTK2B	Deletion
GNRH1	Deletion
GSR	Deletion
GTF2E2	Deletion
NRG1	Deletion
LOXL2	Deletion
NEFM	Deletion
NEFL	Deletion
NKX3-1	Deletion
PNOC	Deletion
PPP2CB	Deletion
PPP2R2A	Deletion
PPP3CC	Deletion
STC1	Deletion
WRN	Deletion
FZD3	Deletion
UBXN8	Deletion
ADAM7	Deletion
TNFRSF10D	Deletion
TNFRSF10C	Deletion
TNFRSF10B	Deletion
TNFRSF10A	Deletion
ENTPD4	Deletion
	20.0001

SORBS3	Deletion
DCTN6	Deletion
PNMA2	Deletion
ADAM28	Deletion
RBPMS	Deletion
TRIM35	Deletion
RHOBTB2	Deletion
KIF13B	Deletion
LEPROTL1	Deletion
SLC39A14	Deletion
ADAMDEC1	Deletion
PURG	Deletion
SLC25A37	Deletion
SCARA3	
	Deletion
TMEM66	Deletion
KCTD9	Deletion
PIWIL2	Deletion
ELP3	Deletion
CCDC25	Deletion
INTS9	Deletion
PBK	Deletion
ZNF395	Deletion
BIN3	Deletion
TEX15	Deletion
KIAA1967	Deletion
PDLIM2	Deletion
EBF2	Deletion
DUSP26	Deletion
HMBOX1	Deletion
RNF122	Deletion
DOCK5	Deletion
FLJ14107	Deletion
C8orf41	Deletion
STMN4	Deletion
MAK16	Deletion
FUT10	Deletion
CHMP7	Deletion
NKX2-6	Deletion
UNC5D	Deletion
PEBP4	Deletion
CDCA2	Deletion
ESCO2	Deletion
FBXO16	Deletion
R3HCC1	Deletion
SCARA5	Deletion
LOC286135	
LUC280135	Deletion

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C8orf80	Deletion
C8orf58	Deletion
C8orf75	Deletion
MBOAT4	Deletion
hsa-mir-3201	Deletion
hsa-mir-3200	Deletion
hsa-mir-3199	Deletion
hsa-mir-3199	Deletion
hsa-mir-3198	Deletion
hsa-mir-1306	
hsa-mir-1281	
hsa-mir-1249	
hsa-mir-1286	
hsa-mir-548i	
hsa-mir-301k	
hsa-mir-659	
hsa-mir-658	
hsa-mir-650	Deletion
hsa-mir-649	Deletion
hsa-mir-648	Deletion
hsa-mir-130k	Deletion
hsa-mir-185	Deletion
hsa-mir-33a	Deletion
hsa-let-7b	Deletion
hsa-let-7a-3	Deletion
ACR	Deletion
ACO2	Deletion
ADORA2A	Deletion
ADRBK2	Deletion
ADSL	Deletion
AP1B1	Deletion
ARSA	Deletion
ARVCF	Deletion
ATF4	Deletion
ATP6V1E1	Deletion
BCR	Deletion
BID	Deletion
BIK	Deletion
TSPO	Deletion
MPPED1	Deletion
СНКВ	Deletion
COMT	Deletion
CPT1B	Deletion
CRKL	Deletion
CRYBA4	Deletion
CRYBB1	Deletion

CRYBB2	Deletion
CRYBB3	Deletion
CSF2RB	Deletion
CSNK1E	Deletion
CYP2D7P1	Deletion
CYP2D6	Deletion
DDT	Deletion
CYB5R3	Deletion
TYMP	Deletion
EP300	Deletion
EWSR1	Deletion
FBLN1	Deletion
XRCC6	Deletion
GGT1	Deletion
GGT3P	Deletion
GGT5	Deletion
GNAZ	Deletion
MCHR1	Deletion
GSC2	Deletion
GSTT1	Deletion
GSTT2 2953	Deletion
H1FO	Deletion
SERPIND1	Deletion
HMOX1	Deletion
IGLL1	Deletion
IL2RB	Deletion
KCNJ4	Deletion
LGALS1	Deletion
LGALS2	Deletion
LIF	Deletion
LIMK2	Deletion
MB	Deletion
MCM5	Deletion
MFNG	Deletion
MGAT3	Deletion
MIF	Deletion
MMP11	Deletion
MN1	Deletion
MPST	Deletion
МҮН9	Deletion
NAGA	Deletion
NCF4	Deletion
NDUFA6	Deletion
DRG1	Deletion
NEFH	Deletion
NF2	Deletion

	5 1
NHP2L1	Deletion
OSM	Deletion
PDGFB	Deletion
PI4KA	Deletion
PMM1	Deletion
41157	Deletion
POLR2F	Deletion
PPARA	Deletion
MAPK1	Deletion
MAPK11	Deletion
PRODH	Deletion
PVALB	Deletion
RAC2	Deletion
RANBP1	Deletion
RANGAP1	Deletion
RFPL1	Deletion
RPL3	Deletion
MAPK12	Deletion
SBF1	Deletion
SLC5A1	Deletion
SMTN	Deletion
SLC5A4	Deletion
SLC7A4	Deletion
SLC25A1	Deletion
SMARCB1	Deletion
SNRPD3	Deletion
SOX10	Deletion
SREBF2	Deletion
SSTR3	Deletion
ST13	Deletion
TBX1	Deletion
TCF20	Deletion
TCN2	Deletion
TEF	Deletion
TIMP3	Deletion
CLDN5	Deletion
TOP1P2	Deletion
TST	Deletion
HIRA	Deletion
UBE2L3	Deletion
UFD1L	Deletion
UPK3A	Deletion
VPREB1	Deletion
WNT7B	Deletion
XBP1	Deletion
YWHAH	Deletion

ZNF70	Deletion
ZNF74	Deletion
DGCR6	Deletion
LZTR1	Deletion
CLTCL1	Deletion
DGCR14	Deletion
SYN3	Deletion
CDC45	Deletion
PLA2G6	Deletion
TPST2	Deletion
GALR3	Deletion
NIPSNAP1	Deletion
APOL1	Deletion
THOC5	Deletion
EIF3D	Deletion
_	
MTMR3	Deletion
CACNA1I	Deletion
TOP3B	Deletion
P2RX6	Deletion
SYNGR1	Deletion
LARGE	Deletion
SNAP29	Deletion
GRAP2	Deletion
PICK1	Deletion
GAL3ST1	Deletion
GTPBP1	Deletion
APOBEC3B	Deletion
RAB36	Deletion
CELSR1	Deletion
PPM1F	Deletion
DEPDC5	
	Deletion
SAPS2	Deletion
SFI1	Deletion
ZBED4	Deletion
JOSD1	Deletion
RBX1	Deletion
DGCR2	Deletion
SCO2	Deletion
HMGXB4	Deletion
TOM1	Deletion
DNAL4	Deletion
SF3A1	Deletion
PKDREJ	Deletion
CACNG2	Deletion
TAB1	Deletion
SLC25A17	
JLCZ3A1/	Deletion

DDX17	Deletion
TXNRD2	Deletion
RASL10A	Deletion
GAS2L1	Deletion
RFPL3S	Deletion
RFPL3	Deletion
RFPL2	Deletion
	Deletion
RFPL1S	
NUP50	Deletion
TOB2	Deletion
KDELR3	Deletion
IFT27	Deletion
TRIOBP	Deletion
CDC42EP1	Deletion
DMC1	Deletion
RABL2B	Deletion
CHEK2	Deletion
PACSIN2	Deletion
USP18	Deletion
MORC2	Deletion
TNRC6B	Deletion
HIC2	Deletion
GRAMD4	Deletion
TTLL12	Deletion
MLC1	Deletion
ZC3H7B	Deletion
C22orf9	Deletion
TTC28	Deletion
CYTSA	Deletion
GCAT	Deletion
CBX6	Deletion
NPTXR	Deletion
PES1	Deletion
CBX7	Deletion
CABIN1	Deletion
PRAME	Deletion
SLC16A8	Deletion
SEC14L2	Deletion
MAPK8IP2	Deletion
RBM9	Deletion
SEZ6L	Deletion
RASD2	Deletion
PATZ1	Deletion
SH3BP1	Deletion
TSSK2	Deletion
PLXNB2	Deletion

SDF2L1	Deletion
PPIL2	Deletion
PITPNB	Deletion
PISD	Deletion
OSBP2	Deletion
MAFF	Deletion
IL17RA	Deletion
BRD1	Deletion
ARHGAP8	Deletion
APOL2	Deletion
POTEH	Deletion
_	
BCL2L13	Deletion
TFIP11	Deletion
C22orf31	Deletion
TBC1D22A	Deletion
GSTTP1	Deletion
C22orf24	Deletion
CBY1	Deletion
SUN2	Deletion
DGCR11	Deletion
DGCR9	Deletion
FBXO7	Deletion
RHBDD3	Deletion
TTLL1	Deletion
POM121L1P	Deletion
SAMM50	Deletion
ATXN10	
	Deletion
FAM19A5	Deletion
TXN2	Deletion
TMEM184B	Deletion
SULT4A1	Deletion
GGA1	Deletion
RIBC2	Deletion
DGCR5	Deletion
DGCR10	Deletion
ARFGAP3	Deletion
SNORD43	Deletion
TRMT2A	Deletion
INPP5J	Deletion
SMC1B	Deletion
CYTH4	Deletion
RTDR1	Deletion
CSDC2	Deletion
RRP7A	Deletion
MCAT	Deletion
APOBEC3C	Deletion

PPPDE2	Deletion
SGSM3	Deletion
HSFYL1	Deletion
CECR6	Deletion
CECR5	Deletion
CECR2	Deletion
POM121L9P	Deletion
CARD10	Deletion
PARVB	Deletion
NCAPH2	Deletion
UQCR10	Deletion
POM121L8P	Deletion
YPEL1	Deletion
ZDHHC8	Deletion
VPREB3	Deletion
PLA2G3	Deletion
C22orf43	Deletion
EIF3L	Deletion
C22orf28	Deletion
GTSE1	Deletion
MTP18	Deletion
MED15	Deletion
UPB1	Deletion
TUBA8	Deletion
CECR1	Deletion
A4GALT	Deletion
MOV10L1	Deletion
SMCR7L	Deletion
DGCR8	Deletion
GNB1L	Deletion
TUG1	Deletion
FAM118A	Deletion
TTC38	Deletion
C22orf26	Deletion
MIOX	Deletion
PRR5	Deletion
PEX26	Deletion
TRMU	Deletion
ZMAT5	Deletion
41155	
SUSD2	Deletion
EIF4ENIF1	Deletion
PANX2	Deletion
TOMM22	Deletion
PDXP	Deletion
ASPHD2	Deletion

MICAL3	Deletion
MKL1	Deletion
APOBEC3G	Deletion
XPNPEP3	Deletion
PARVG	Deletion
CERK	Deletion
EFCAB6	Deletion
MRPL40	Deletion
RTN4R	Deletion
SLC2A11	Deletion
CENPM	Deletion
ALG12	Deletion
NOL12	Deletion
CRELD2	Deletion
C22orf46	Deletion
C220rf40	Deletion
KCTD17	Deletion
CCDC134	Deletion
ADM2	Deletion
FOXRED2	Deletion
BAIAP2L2	Deletion
SCUBE1	Deletion
TRABD	Deletion
PNPLA3	Deletion
THAP7	Deletion
APOL6	Deletion
APOL5	Deletion
APOL4	Deletion
APOL3	Deletion
OR11H1	Deletion
C22orf13	Deletion
SELO	Deletion
SLC25A18	Deletion
L3MBTL2	Deletion
TBC1D10A	Deletion
HDAC10	Deletion
KREMEN1	Deletion
ZNRF3	Deletion
ASCC2	Deletion
TMEM191A	Deletion
LDOC1L	Deletion
POLDIP3	Deletion
C22orf23	Deletion
MYO18B	Deletion
PHF5A	Deletion
KLHL22	Deletion

KIAA1644 Deletion SHANK3 Deletion DGCR6L Deletion RIMBP3 Deletion MICALL1 Deletion TUBGCP6 Deletion **KIAA1671** Deletion HPS4 Deletion LOC90834 Deletion SCARF2 Deletion GGTLC2 Deletion LMF2 Deletion LOC91316 Deletion DERL3 Deletion IGLL3 Deletion LRP5L Deletion **RNF185** Deletion ISX Deletion RPS19BP1 Deletion C22orf32 Deletion RRP7B Deletion **SERHL** Deletion LOC96610 Deletion PHF21B Deletion MGC16703 Deletion KLHDC7B Deletion PIK3IP1 Deletion FAM83F Deletion ELFN2 Deletion C1QTNF6 Deletion TNFRSF13C Deletion GAB4 Deletion C22orf39 Deletion C22orf25 Deletion ZNF280A Deletion SGSM1 Deletion EMID1 Deletion ANKRD54 Deletion APOBEC3D Deletion **SELM** Deletion ZNF280B Deletion CCT8L2 Deletion XKR3 Deletion LOC150185 Deletion LOC150197 Deletion AIFM3 Deletion

RIMBP3C 15	
YDJC	Deletion
ZDHHC8P1	Deletion
C22orf15	Deletion
HSCB	Deletion
CCDC117	Deletion
HORMAD2	Deletion
DUSP18	Deletion
C22orf27	Deletion
C22orf42	Deletion
ENTHD1	Deletion
DNAJB7	Deletion
CHADL	Deletion
MEI1	Deletion
FAM109B	Deletion
NFAM1	Deletion
PNPLA5	Deletion
LOC150381	Deletion
C22orf40	Deletion
CN5H6.4	
	Deletion
CCDC116	Deletion
CABP7	Deletion
TMPRSS6	Deletion
APOBEC3H	Deletion
WBP2NL	Deletion
TTLL8	Deletion
POLR3H	Deletion
RNF215	Deletion
APOBEC3A	Deletion
APOBEC3F	Deletion
C22orf30	Deletion
SERHL2	Deletion
BPIL2	Deletion
TMEM211	Deletion
SEC14L3	Deletion
POM121L4P	Deletion
RGL4	Deletion
ATP5L2	Deletion
LOC284900	Deletion
SEC14L4	Deletion
RPL23AP82	Deletion
SLC35E4	Deletion
C22orf33	Deletion
LOC339674	Deletion
C22orf34	Deletion
PI4KAP2	Deletion
1 1711/7/17 4	Defetion

CD C4D	5 1
SDC4P	Deletion
CHKB-CPT1B	Deletion
psiTPTE22	Deletion
C22orf36	Deletion
NCRNA00207	
LOC391322	Deletion
LOC400891	Deletion
CHCHD10	Deletion
LOC400927	Deletion
LOC400931	Deletion
IL17REL	Deletion
SRRD	Deletion
FAM116B	Deletion
PIM3	Deletion
FLJ39582	Deletion
P2RX6P	Deletion
PIWIL3	Deletion
MIAT	Deletion
ODF3B	Deletion
CCDC157	Deletion
PRR5-ARHGA	Deletion
LOC644165	Deletion
C22orf41	Deletion
C22orf45 64	Deletion
POM121L10F	
LOC646851	Deletion
LOC648691	Deletion
GATSL3	Deletion
GSTTP2	Deletion
PI4KAP1	Deletion
LOC730668	Deletion
DDTL	Deletion
SNORD125	Deletion
CECR7	Deletion
CECR4	Deletion
LOC1001446	
FLJ41941	Deletion
LOC1002717	
CLEC3A	Deletion
WWOX	Deletion
ANKS1B	Deletion
FAM71C	Deletion
hsa-mir-3183	
hsa-mir-22	Deletion
ABR	Deletion
CRK	Deletion

MYO1C Deletion SERPINF1 Deletion **PITPNA** Deletion SERPINF2 Deletion RPA1 Deletion **YWHAE** Deletion DOC2B Deletion SCARF1 Deletion RPH3AL Deletion PRPF8 Deletion TIMM22 Deletion **GEMIN4** Deletion GLOD4 Deletion INPP5K Deletion RNMTL1 Deletion VPS53 Deletion NXN Deletion FAM57A Deletion **RILP** Deletion C17orf91 Deletion SMYD4 Deletion SLC43A2 Deletion WDR81 Deletion TUSC5 Deletion FAM101B Deletion C17orf97 Deletion ELP2P Deletion hsa-mir-4262 Deletion hsa-mir-4261 Deletion hsa-mir-3125 Deletion hsa-mir-548s Deletion hsa-mir-1301 Deletion ACP1 Deletion ADCY3 Deletion **APOB** Deletion **RHOB** Deletion CAD Deletion **CENPA** Deletion DDX1 Deletion DNMT3A Deletion **DTNB** Deletion E2F6 Deletion FKBP1B Deletion FTHL3 Deletion **GCKR** Deletion

GTF3C2

Deletion

HADHA Deletion **HADHB** Deletion HPCAL1 Deletion ID2 Deletion KCNF1 Deletion KCNK3 Deletion KCNS3 Deletion KHK Deletion KIF3C Deletion MATN3 Deletion MPV17 Deletion **MYCN** Deletion ODC1 Deletion Deletion **POMC** PPM1G Deletion RPS7 Deletion RRM2 Deletion SDC1 Deletion SOX11 Deletion ADAM17 Deletion TPO Deletion TSSC1 Deletion UCN Deletion VSNL1 Deletion SLC30A3 Deletion **PXDN** Deletion KLF11 Deletion NCOA1 Deletion ASAP2 Deletion SLC5A6 Deletion EIF2B4 Deletion TAF1B Deletion ITGB1BP1 Deletion **OTOF** Deletion ROCK2 Deletion TP53I3 Deletion GREB1 Deletion LAPTM4A Deletion RNF144A Deletion SNX17 Deletion SUPT7L Deletion **PREB** Deletion PDIA6 Deletion **MYCNOS** Deletion CGREF1 Deletion RAB10 Deletion

YWHAQ	Deletion
EMILIN1	Deletion
GPN1	Deletion
MAPRE3	Deletion
SLC4A1AP	Deletion
EFR3B	Deletion
MYT1L	Deletion
LPIN1	Deletion
PUM2	Deletion
NTSR2	Deletion
IFT172	Deletion
SH3YL1	Deletion
TRIB2	Deletion
GRHL1	Deletion
NRBP1	Deletion
ITSN2	Deletion
TTC15	Deletion
DNAJC27	Deletion
C2orf28	Deletion
NBAS	Deletion
SF3B14	Deletion
CPSF3	Deletion
SNTG2	Deletion
ATAD2B	Deletion
TMEM214	Deletion
C2orf18	Deletion
ASXL2	Deletion
ADI1	Deletion
ALLC	Deletion
DPYSL5	Deletion
TRIM54	Deletion
KIDINS220	Deletion
WDR35	
RDH14	Deletion Deletion
AGBL5	Deletion
C2orf43	Deletion
HS1BP3	Deletion
FNDC4	Deletion
COLEC11	Deletion
CENPO	Deletion
CCDC121	Deletion
SMC6	Deletion
NOL10	Deletion
C2orf44	Deletion
FAM49A	Deletion
C2orf16	Deletion

ZNF512	Deletion
ABHD1	Deletion
EPT1	Deletion
RSAD2	Deletion
C2orf39	Deletion
NT5C1B	Deletion
KLHL29	Deletion
CMPK2	Deletion
MBOAT2	Deletion
TMEM18	Deletion
CIB4	Deletion
OSR1	Deletion
TTC32	Deletion
ZNF513	Deletion
C2orf50	Deletion
PQLC3	Deletion
LOC150622	Deletion
TCF23	Deletion
FAM84A	Deletion
GDF7	Deletion
GPR113	Deletion
UBXN2A	Deletion
CYS1	Deletion
KRTCAP3	Deletion
ATP6V1C2	Deletion
RNASEH1	Deletion
FAM150B	Deletion
DNAJC5G	Deletion
IAH1	Deletion
C2orf70	Deletion
C2orf53	Deletion
LOC339788	Deletion
MSGN1	Deletion
GEN1	Deletion
C2orf48	Deletion
PFN4	Deletion
LOC375190	Deletion
MFSD2B	Deletion
? 391343	Deletion
C2orf79	Deletion
LOC400940	Deletion
FAM110C	Deletion
C2orf84	Deletion
RAD51AP2	Deletion
LOC730811	Deletion
OST4	Deletion
	- · · · · ·

hsa-mir-4282 Deletion hsa-mir-548L Deletion hsa-mir-2113 Deletion hsa-mir-30c- Deletion hsa-mir-30a Deletion BAI3 Deletion **BCKDHB** Deletion **CCNC** Deletion CGA Deletion CNR1 Deletion COL9A1 Deletion COL12A1 Deletion COL19A1 Deletion COX7A2 Deletion EEF1A1 Deletion EPHA7 Deletion GABRR1 Deletion GABRR2 Deletion GRIK2 Deletion HTR1B Deletion HTR1E Deletion IMPG1 Deletion ME1 Deletion **MY06** Deletion NT5E Deletion PGM3 Deletion POU3F2 Deletion RNY4 Deletion SIM1 Deletion ELOVL4 Deletion MAP3K7 Deletion **TPBG** Deletion TTK Deletion PTP4A1 Deletion **RNGTT** Deletion **TBX18** Deletion HMGN3 Deletion FHL5 Deletion SNAP91 Deletion CASP8AP2 Deletion **SYNCRIP** Deletion SLC35A1 Deletion FUT9 Deletion PNRC1 Deletion ASCC3 Deletion **KIAA1009** Deletion

ANKRD6	Deletion
RIMS1	Deletion
DOPEY1	Deletion
ZNF292	Deletion
MDN1	Deletion
KIAA0776	Deletion
PHF3	Deletion
ORC3L	Deletion
MTO1	Deletion
SFRS18	Deletion
IBTK	Deletion
SENP6	Deletion
FBXL4	Deletion
SLC17A5	Deletion
SNORD50A	Deletion
FILIP1	Deletion
NDUFAF4	Deletion
CYB5R4	
	Deletion Deletion
UBE2J1 LGSN	
	Deletion
COQ3	Deletion
PHIP	Deletion
AKIRIN2	Deletion
NCRNA00120	
DDX43	Deletion
FAM46A	Deletion
TMEM30A	Deletion
LMBRD1	Deletion
KCNQ5	Deletion
RARS2	Deletion
C6orf162	Deletion
LYRM2	Deletion
SNX14	Deletion
HACE1	Deletion
FAM135A	Deletion
RRAGD	Deletion
PRDM13	Deletion
BACH2	Deletion
SMAP1	Deletion
C6orf164	Deletion
OGFRL1	Deletion
MANEA	Deletion
C6orf155	Deletion
KHDC1	Deletion
GPR63	Deletion
SPACA1	Deletion
JI NOMI	Deletion

SH3BGRL2	Deletion
MCHR2	Deletion
C6orf168	Deletion
GJA10	Deletion
USP45	Deletion
UBE2CBP	Deletion
MRAP2	Deletion
RWDD2A	Deletion
KLHL32	Deletion
C6orf150	Deletion
RIPPLY2	Deletion
IRAK1BP1	Deletion
B3GAT2	Deletion
C6orf57	Deletion
CD109	Deletion
PM20D2	Deletion
_	
SFRS13B	Deletion
C6orf221	Deletion
C6orf165	Deletion
PRSS35	Deletion
LCA5	Deletion
KHDRBS2	Deletion
C6orf163	Deletion
C6orf167	Deletion
DPPA5	Deletion
EYS	Deletion
GUSBL2	Deletion
GJB7	Deletion
SNHG5	Deletion
C6orf147	Deletion
OOEP	Deletion
MCART3P	Deletion
TSG1	Deletion
SNORD50B	Deletion
KHDC1L	Deletion
AFG3L1	Deletion
APRT	Deletion
C16orf3	Deletion
CA5A	Deletion
CBFA2T3	Deletion
CDH15	Deletion
CYBA	Deletion
DPEP1	Deletion
FANCA	Deletion
GALNS	Deletion
GAS8	Deletion

MC1R Deletion MVD Deletion CHMP1A Deletion RPL13 Deletion SPG7 Deletion SLC7A5 Deletion CDK10 Deletion C16orf7 Deletion FAM38A Deletion TUBB3 Deletion PRDM7 Deletion TCF25 Deletion ZCCHC14 Deletion CPNE7 Deletion IL17C Deletion ANKRD11 Deletion TRAPPC2L Deletion KLHDC4 Deletion DEF8 Deletion **BANP** Deletion JPH3 Deletion DBNDD1 Deletion FBXO31 Deletion CDT1 Deletion MAP1LC3B Deletion SPIRE2 Deletion **ZNF469** Deletion CENPBD1 Deletion ZNF276 Deletion **RNF166** Deletion SPATA2L Deletion C16orf55 Deletion **ZC3H18** Deletion ZFPM1 Deletion MGC23284 Deletion **ZNF778** Deletion ACSF3 Deletion C16orf81 Deletion SNAI3 Deletion CTU2 Deletion PABPN1L Deletion SNORD68 Deletion LOC1001296 Deletion LOC1001300 Deletion hsa-mir-4324 Deletion hsa-mir-3191 Deletion hsa-mir-319(Deletion hsa-mir-320€ Deletion hsa-mir-220c Deletion hsa-mir-769 Deletion hsa-mir-642 Deletion hsa-mir-330 Deletion BAX Deletion BCAT2 Deletion C5AR1 Deletion CA11 Deletion CALM3 Deletion **CD37** Deletion CGB Deletion CKM Deletion AP2S1 Deletion CRX Deletion DBP Deletion **DMPK** Deletion **DMWD** Deletion EMP3 Deletion ERCC1 Deletion ERCC2 Deletion **FOSB** Deletion FTL Deletion FUT1 Deletion FUT2 Deletion **GIPR** Deletion GPR4 Deletion GRIN2D Deletion GRLF1 Deletion GYS1 Deletion FOXA3 Deletion HRC Deletion KCNA7 Deletion KCNJ14 Deletion LHB Deletion LIG1 Deletion NOVA2 Deletion NPAS1 Deletion NTF4 Deletion NUCB1 Deletion PPP5C Deletion **PTGIR** Deletion RPL18 Deletion RTN2 Deletion SEPW1 Deletion

SLC1A5	Deletion
SLC8A2	Deletion
SNRNP70	Deletion
SNRPD2	Deletion
SULT2B1	Deletion
SULT2A1	Deletion
TULP2	Deletion
VASP	Deletion
SYMPK	Deletion
TEAD2	Deletion
PPFIA3	Deletion
PLA2G4C	Deletion
NAPA	Deletion
PGLYRP1	Deletion
CYTH2	Deletion
DHX34	Deletion
SAE1	Deletion
PPP1R13L	Deletion
CD3EAP	Deletion
RUVBL2	Deletion
KDELR1	Deletion
KPTN	Deletion
CARD8	Deletion
ZC3H4	Deletion
FBXO46	Deletion
SYNGR4	Deletion
PPP1R15A	Deletion
EML2	Deletion
PRKD2	Deletion
CCDC9	Deletion
IRF2BP1	Deletion
FGF21	Deletion
BBC3	Deletion
DKKL1	Deletion
GPR77	Deletion
DHDH	Deletion
SLC6A16	Deletion
STRN4	Deletion
GLTSCR2	Deletion
GLTSCR1	Deletion
EHD2	Deletion
HSD17B14	Deletion
TRPM4	Deletion
QPCTL	Deletion
FAM83E	Deletion
RASIP1	Deletion

TMEM160 Deletion C19orf73 Deletion PNMAL1 Deletion TMEM143 Deletion CABP5 Deletion SPHK2 Deletion MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion HIF3A Deletion FKRP Deletion GRWD1 Deletion CCDC8 Deletion CCDC8 Deletion CCDC114 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB4 Deletion CGB4 Deletion CCDC155 Deletion		
PNMAL1 Deletion TMEM143 Deletion CABP5 Deletion SPHK2 Deletion MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion HIF3A Deletion FKRP Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB4 Deletion CGB4 Deletion CCDC155 Dele		
TMEM143 Deletion CABP5 Deletion SPHK2 Deletion MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion HIF3A Deletion FKRP Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB3 Deletion CGB4 Deletion CGB4 Deletion CGB4 Deletion CGB5 Deletion CGB6 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB4 Deletion CGB4 Deletion CGB6 Deletion CGB6 Deletion CGB9 Deletion CGB		
CABP5 Deletion SPHK2 Deletion MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion LIN7B Deletion FKRP Deletion GRWD1 Deletion CCDC8 Deletion CCDC8 Deletion CCDC114 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB3 Deletion CGB4 Deletion CGB4 Deletion CGB5 Deletion CGB1 Deletion CGB0 Deletion CGB1 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB4 Deletion CGB4 Deletion CCDC155 Deletion CC		
SPHK2 Deletion MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion HIF3A Deletion FKRP Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB4 Deletion CGB4 Deletion CGB5 Deletion CGB6 Deletion CGB6 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB9 Deletion	_	
MEIS3 Deletion PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion LIN7B Deletion FKRP Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CCDC115 Deletion RLC3 Deletion CCDC155 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion CFL2 Deletion CFR24 Deletion CFR25 Deletion CFR26 DELET		
PNMAL2 Deletion PLEKHA4 Deletion ELSPBP1 Deletion LIN7B Deletion HIF3A Deletion FKRP Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CCDC155 Deletion RLC3 Deletion CCDC155 Delet	_	
PLEKHA4 Deletion ELSPBP1 Deletion LIN7B Deletion HIF3A Deletion FKRP Deletion OPA3 Deletion RSPH6A Deletion CCDC8 Deletion CCDC8 Deletion CCDC114 Deletion CCB5 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CCDC115 Deletion RLC3 Deletion CCDC155 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion CFL2 Deletion CFL2 Deletion CFR24 Deletion CFR25 Deletion CFR26 Deletion CFR26 Deletion CFR27 Deletion CFR27 Deletion CFR28 Deletion CFR29 Deletion CFR20 Deletion CF		
ELSPBP1 Deletion LIN7B Deletion HIF3A Deletion FKRP Deletion OPA3 Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CCB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CCDC115 Deletion RLC3 Deletion CCDC155 Deletion CCD		
LIN7B Deletion HIF3A Deletion FKRP Deletion OPA3 Deletion RSPH6A Deletion CCDC8 Deletion CCDC8 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB2 Deletion CGB4 Deletion CCDC155 Deletion FPM1N Deletion SIX5 Deletion DACT3 Deletion SIX5 Deletion CCDC155 De		Deletion
HIF3A Deletion FKRP Deletion OPA3 Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion ZNF541 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion NTN5 Deletion NTN5 Deletion RLC3 Deletion CCDC155 Deletion CCDC155 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion CGR1 Deletion CCDC155 Del		Deletion
FKRP Deletion OPA3 Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion CCDC8 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion CGB8 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion RLC3 Deletion CCDC155 Deletion CCDC155 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion SIX5 Deletion CFL2 Deletion CFL2 Deletion CFL2 Deletion CRPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion MAMSTR Deletion MYPOP Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	LIN7B	Deletion
OPA3 Deletion RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion ZNF541 Deletion CCDC114 Deletion DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion NTN5 Deletion NTN5 Deletion RLC3 Deletion CCDC155 Deletion CCDC155 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion SIX5 Deletion CRPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion MAMSTR Deletion IZUMO1 Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	HIF3A	Deletion
RSPH6A Deletion GRWD1 Deletion CCDC8 Deletion CCDC114 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion CMTK3 Deletion CMTK3 Deletion CCDC155 Deletion CC	FKRP	Deletion
GRWD1 Deletion CCDC8 Deletion ZNF541 Deletion CCDC114 Deletion DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion CGB1 Deletion CGB2 Deletion CGB2 Deletion NTN5 Deletion NTN5 Deletion RLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion SIX5 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	OPA3	Deletion
CCDC8 Deletion ZNF541 Deletion CCDC114 Deletion DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion CCDC155 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	RSPH6A	Deletion
ZNF541 Deletion CCDC114 Deletion DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion NTN5 Deletion NTN5 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion SIX5 Deletion ZNF114 Deletion ZNF114 Deletion PRR24 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion	GRWD1	Deletion
CCDC114 Deletion DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion CCDC155 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion PRR24 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	CCDC8	Deletion
DKFZp434J02 Deletion CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion RLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion SIX5 Deletion ZNF114 Deletion ZNF114 Deletion PRR24 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion IGFL1 Deletion	ZNF541	Deletion
CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion	CCDC114	Deletion
CGB5 Deletion CGB7 Deletion CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion	DKFZp434J02	Deletion
CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion	•	
CGB8 Deletion GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion	CGB7	Deletion
GNG8 Deletion PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL1 Deletion		
PTH2 Deletion CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion PRR24 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
CGB1 Deletion CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
CGB2 Deletion LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
LMTK3 Deletion NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
NTN5 Deletion PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
PPM1N Deletion KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
KLC3 Deletion CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion		
CCDC155 Deletion DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
DACT3 Deletion SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion		
SIX5 Deletion IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
IGFL2 Deletion ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
ZNF114 Deletion SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
SPACA4 Deletion PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
PRR24 Deletion TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
TPRX1 Deletion MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
MAMSTR Deletion IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
IZUMO1 Deletion MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
MYPOP Deletion NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
NANOS2 Deletion IGFL1 Deletion IGFL3 Deletion		
IGFL1 Deletion IGFL3 Deletion		
IGFL3 Deletion		
IGFL4 Deletion		
	IGFL4	Deletion

SEC1	Deletion
SNORD23	Deletion
CCDC61	Deletion
SNAR-G1	Deletion
SNAR-A2 10	Deletion
BSPH1	Deletion
SNAR-A3 10	Deletion
SNAR-A13 10	Deletion
SNAR-C2 100	Deletion
SNAR-C4	Deletion
SNAR-E	Deletion
SNAR-C3	Deletion
SNAR-G2	Deletion
hsa-mir-571	Deletion
ATP5I	Deletion
DGKQ	Deletion
GAK	Deletion
IDUA	Deletion
MYL5	Deletion
PDE6B	Deletion
ZNF141	Deletion
PCGF3	Deletion
SPON2	Deletion
CPLX1	Deletion
SLC26A1	Deletion
FGFRL1	Deletion
PIGG	Deletion
ABCA11P	Deletion
MFSD7	Deletion
TMEM175	Deletion
ZNF595	Deletion
ZNF721	Deletion
ZNF718	Deletion
RNF212	Deletion
ZNF876P	Deletion
ZNF732	Deletion
LOC1001308	Deletion
hsa-mir-1302	Deletion
hsa-mir-1234	Deletion
hsa-mir-939	Deletion
hsa-mir-937	Deletion
hsa-mir-661	Deletion
hsa-mir-151	Deletion
hsa-mir-30b	Deletion
hsa-mir-30d	Deletion
BAI1	Deletion
<i>_,</i>	20.0001

CYC1 Deletion CYP11B1 Deletion CYP11B2 Deletion EEF1D Deletion GLI4 Deletion GML Deletion GPR20 Deletion **GPT** Deletion **GRINA** Deletion HSF1 Deletion KCNQ3 Deletion LY6E Deletion LY6H Deletion NFKBIL2 Deletion **PLEC** Deletion PTK2 Deletion RPL8 Deletion ST3GAL1 Deletion SLA Deletion TG Deletion TSTA3 Deletion ZNF7 Deletion ZNF16 Deletion **PSCA** Deletion LY6D Deletion JRK Deletion DGAT1 Deletion GPAA1 Deletion WISP1 Deletion FOXH1 Deletion RECQL4 Deletion LRRC14 Deletion **ZNF623** Deletion HHLA1 Deletion NDRG1 Deletion KHDRBS3 Deletion PTP4A3 Deletion PUF60 Deletion **DENND3** Deletion ZC3H3 Deletion EFR3A Deletion **ARC** Deletion BOP1 Deletion **SCRIB** Deletion LRRC6 Deletion FBXL6 Deletion

OPLAH	Deletion
EIF2C2	Deletion
COMMD5	Deletion
CPSF1	Deletion
CYHR1	Deletion
FAM135B	Deletion
PHF20L1	Deletion
VPS28	Deletion
C8orf30A 51	Deletion
KCNK9	Deletion
C8orf55	Deletion
CHRAC1	Deletion
EXOSC4	Deletion
LY6K	Deletion
_	Deletion
SLC39A4	
SLURP1	Deletion
SLC45A4	Deletion
ZFAT	Deletion
ZNF250	Deletion
PYCRL	Deletion
C8orf33	Deletion
LYNX1	Deletion
C8orf51	Deletion
GPR172A	Deletion
GSDMD	Deletion
ZNF696	Deletion
ARHGAP39	Deletion
ZNF34	Deletion
SHARPIN	Deletion
EPPK1	Deletion
SCRT1	Deletion
TRAPPC9	Deletion
MAF1	Deletion
PARP10	Deletion
TIGD5	Deletion
PPP1R16A	Deletion
ZNF251	Deletion
KIFC2	Deletion
NAPRT1	Deletion
HPYR1	Deletion
MFSD3	Deletion
RHPN1	Deletion
TOP1MT	Deletion
LYPD2	Deletion
TMEM71	Deletion
COL22A1	Deletion

ADCK5	Deletion
TSNARE1	Deletion
MAPK15	Deletion
ZNF707	Deletion
BREA2	Deletion
FAM83H	Deletion
LOC286094	Deletion
ZNF252	Deletion
TMED10P1	Deletion
C8orf77	Deletion
C8orf31	Deletion
ZFP41	Deletion
GPIHBP1	Deletion
NRBP2	Deletion
ZNF517	Deletion
KIAA1875	Deletion
C8ORFK29	Deletion
SPATC1	Deletion
FLJ43860	Deletion
MAFA	Deletion
MGC70857	Deletion
LRRC24	Deletion
ZFATAS	Deletion
NCRNA0005	Deletion
C8orf73	Deletion
SCXB 642658	Deletion
HEATR7A	Deletion
OC90	Deletion
LOC731779	Deletion
LOC1001302	
LOC1001336	
FGF2	Methylation
STK33	Methylation
FAM89A	Methylation
SOX7	Methylation
RUNX3	Methylation
B3GNT5	Methylation
DSC3	•
	Methylation
PKDREJ	Methylation
DZIP1	Methylation
EOMES	Methylation
CCND2	Methylation
PRKCQ	Methylation
LEPREL1	Methylation
KLK10	Methylation
SLC34A2	Methylation

ST8SIA1	Methylation
EIF5A2	Methylation
CXCL1	Methylation
CXCL5	Methylation
GSTP1	Methylation
VIPR2	Methylation
KCNK17	Methylation
ID4	Methylation
FBLN2	Methylation
ASCL2	Methylation
CCDC3	Methylation
OSR1	Methylation
IGF2AS	Methylation
COL23A1	Methylation
GPX7	Methylation
MAL	Methylation
FUT9	Methylation
RCSD1	Methylation
KIF17	Methylation
PAK7	Methylation
DCC	Methylation
PPP1R14C	Methylation
STAC2	Methylation
GALNT12	Methylation
HAAO	Methylation
SPATA18	Methylation
ZNF132	Methylation
EFCAB1	, Methylation
CLDN11	, Methylation
PKIA	, Methylation
DGKI	, Methylation
CLIP4	Methylation
VCAN	Methylation
BCL11A	Methylation
ADAMTS5	Methylation
PTGDR	Methylation
LTF	Methylation
PDPN	Methylation
EDN3	
RECK	Methylation
	Methylation
ADAM12	Methylation
SFRP1	Methylation
CYP7B1	Methylation
PDGFRA	Methylation
PTH2R	Methylation
JAM2	Methylation

CHST3	Methylation
NTRK3	Methylation
ACTA1	Methylation
CPXM1	Methylation
ENTPD3	Methylation
OSBPL3	Methylation
WIF1	Methylation
FZD10	Methylation
TFPI2	Methylation
PBX4	Methylation
TCF7	Methylation
CD8B	Methylation
SPG20	Methylation
FGF10	Methylation
RRAD	Methylation
FNDC4	Methylation
COL5A1	Methylation
KCNJ2	Methylation
NEFH	Methylation
FLRT2	Methylation
D4S234E	Methylation
WNT2	Methylation
KCNK13	Methylation
PRNP	Methylation
CHRNA3	Methylation
GAS7	Methylation
C10orf107	Methylation
SFRP2	Methylation
SLIT2	Methylation
PRKCDBP	Methylation
DKK1	Methylation
FADS2	Methylation
TNFRSF10C	Methylation
NPY5R	Methylation
RARB	Methylation
PTPRM	Methylation
COL6A2	Methylation
ZNF542	Methylation
MDFI	Methylation
TSPYL5	Methylation
HAND2	Methylation
CDO1	Methylation
COL1A2	, Methylation
RIC3	Methylation
HOXA5	Methylation
CD40	Methylation
-	,

PAM Methylation COL9A3 Methylation DYRK3 Methylation RASSF2 Methylation WNT10A Methylation NPFFR2 Methylation CDC14B Methylation HOXA9 Methylation GNA14 Methylation CCDC65 Methylation VSNL1 Methylation DIO2 Methylation CHL1 Methylation MRPS21 Methylation SYT6 Methylation CXCL12 Methylation TOX2 Methylation **CCNJL** Methylation CLDN1 Methylation CHRNB1 Methylation MGC42105 Methylation **TFPI** Methylation **FST** Methylation LIMS2 Methylation SNA₁₂ Methylation ACN9 Methylation Methylation CHI3L2 SPON1 Methylation CDH11 Methylation PLS3 Methylation **FES** Methylation GNG11 Methylation GRP Methylation **MET** Methylation EPHB1 Methylation NEFM Methylation DNM3 Methylation IRAK3 Methylation ALDH1A3 Methylation ATP10A Methylation Methylation ELMO1 PELI2 Methylation RAB38 Methylation RYR1 Methylation ZMYND12 Methylation DOK5 Methylation

Methylation GLT8D2 KDELC1 Methylation C6orf145 Methylation CBR1 Methylation AGTR1 Methylation COL14A1 Methylation PON₃ Methylation FSTL1 Methylation AQP3 Methylation Methylation NTRK2 SESN3 Methylation STAT5A Methylation KLK7 Methylation CHRDL2 Methylation AK5 Methylation B3GNT3 Methylation LIPG Methylation TGFBR2 Methylation MAMDC2 Methylation SLFN12 Methylation **HYDIN** Methylation GOLM1 Methylation RAB31 Methylation MGAT3 Methylation **ZNF502** Methylation CITED4 Methylation Methylation SCGB3A1 FZD9 Methylation **EGFR** Methylation PID1 Methylation PCSK5 Methylation CDH22 Methylation Methylation ALKBH3 SLC5A1 Methylation TINAGL1 Methylation TRIM17 Methylation SCN4B Methylation CST6 Methylation EFHA2 Methylation GDF10 Methylation **DSE** Methylation PPP1R14A Methylation WASF3 Methylation ZEB2 Methylation NRN1 Methylation CNN1 Methylation

05140	
GRIA3	Methylation
TLL1	Methylation
AQP5	Methylation
FBLN5	Methylation
VWA1	Methylation
LAMC1	Methylation
PTGIS	Methylation
TRPV4	Methylation
BMP8A	Methylation
TNFRSF11B	Methylation
TEKT3	Methylation
BTG3	Methylation
FARP1	Methylation
LGALS3	Methylation
PRKD1	Methylation
KLHL34	Methylation
FAM46B	Methylation
RPS6KA2	Methylation
C11orf70	Methylation
FABP3	Methylation
TBX5	Methylation
SPATA6	Methylation
SPARC	Methylation
COTL1	Methylation
GPM6B	Methylation
TMEM71	Methylation
TMEM35	Methylation
NDP	Methylation
LOXL4	Methylation
SERPINE2	Methylation
ITM2A	Methylation
SOSTDC1	Methylation
APOBEC3C	Methylation
RARRES1	Methylation
FOXF2	Methylation
MFSD7	, Methylation
MYL9	Methylation
CCDC8	Methylation
CHODL	Methylation
RAC2	Methylation
PLEKHF1	Methylation
ZNF238	Methylation
RSPO1	Methylation
TMEM130	Methylation
IL32	Methylation
SCARA3	Methylation
JUNINAS	ivictifylation

ARHGAP22 Methylation FBLIM1 Methylation KCNK5 Methylation IGF1 Methylation STMN2 Methylation CACNA1C Methylation KRT7 Methylation WDR63 Methylation COL1A1 Methylation PPP1R1B Methylation CLEC2B Methylation NEK6 Methylation TGFBR3 Methylation Methylation CYB5R2 IFNGR2 Methylation TTC23 Methylation **C**3 Methylation **GALM** Methylation ASS1 Methylation **SGCD** Methylation MOBKL2B Methylation LAMB1 Methylation SYT11 Methylation **SMO** Methylation MMP7 Methylation HGF Methylation Methylation KCNA2 CHST6 Methylation PLAGL1 Methylation KCNN4 Methylation FAM124B Methylation HOXA4 Methylation SLC40A1 Methylation FAM49A Methylation PCDH7 Methylation **GYPC** Methylation CARD9 Methylation FAM113B Methylation LY75 Methylation CX3CL1 Methylation Methylation RASL10A **POMC** Methylation ART5 Methylation DPYSL3 Methylation Methylation SCN2B **NFYC** Methylation

NLGN4X	Methylation
TRO	Methylation
SLC46A2	Methylation
RGS14	Methylation
S100A2	Methylation
ZNF532	Methylation
FMOD	Methylation
NDN	Methylation
DHRS12	Methylation
MPP6	Methylation
KCTD12	Methylation
MAP3K14	Methylation
GLRX	Methylation
PRSS27	Methylation
PSTPIP1	Methylation
JPH2	Methylation
TPST1	Methylation
PARP8	Methylation
SCPEP1	Methylation
NINJ2	Methylation
PHACTR2	Methylation
DISC1	Methylation
SCN5A	Methylation
NXN	Methylation
FOXO1	Methylation
LCN2	Methylation
SCNN1A	Methylation
PLXDC2	Methylation
LHFP	Methylation
LAMB3	Methylation
KLHL5	Methylation
PPM1M	Methylation
PHYHIP	Methylation
SERPING1	, Methylation
CRIM1	, Methylation
TMEM92	, Methylation
C2orf39	Methylation
TNFSF12	Methylation
PLSCR4	Methylation
CALD1	Methylation
CHI3L1	Methylation
LPXN	Methylation
DIRAS3	Methylation
SLC25A20	Methylation
EFEMP1	Methylation
ACVR1	Methylation
MONIT	ivictifyiation

C2orf40 Methylation KLK5 Methylation CHST8 Methylation OXGR1 Methylation ALDH2 Methylation H2AFY2 Methylation CST7 Methylation RUNX1T1 Methylation C13orf29 Methylation KRT15 Methylation TPM2 Methylation HCLS1 Methylation DYNC1I1 Methylation **FCGBP** Methylation Methylation NAP1L3 Methylation RUNX1 Methylation COL18A1 YPEL4 Methylation BANK1 Methylation **HLA-DPB1** Methylation TIMP1 Methylation RAB33A Methylation **CSDA** Methylation **GGN** Methylation RSPO3 Methylation TPM1 Methylation Methylation AIF1 HTRA1 Methylation UNC13D Methylation **GALNT5** Methylation RTN1 Methylation KRT6A Methylation EFEMP2 Methylation BNC₂ Methylation SPNS3 Methylation DMD Methylation GSPT2 Methylation TRIM29 Methylation **SSPN** Methylation STAT4 Methylation CNN3 Methylation A2M Methylation GAB3 Methylation PDLIM4 Methylation TES Methylation MSRB3 Methylation

SKAP2	Methylation
CCL23	Methylation
THBS3	Methylation
RASIP1	Methylation
PAQR8	Methylation
HSD17B2	Methylation
ARL11	Methylation
ARHGAP9	Methylation
SPARCL1	Methylation
C8orf79	Methylation
CLIC6	Methylation
DLL1	Methylation
MFAP4	Methylation
GJB5	Methylation
GMFG	Methylation
RIMS3	Methylation
RGN	Methylation
IL1RAP	Methylation
S100A4	Methylation
MIA	Methylation
VNN2	Methylation
FAP	Methylation
MRGPRF	Methylation
PLD1	Methylation
CCDC89	Methylation
PIK3CD	Methylation
SLC46A3	Methylation
GJA1	Methylation
WIPF1	Methylation
RAB3IL1	Methylation
LCN12	Methylation
CD37	Methylation
MAGEE2	Methylation
STK24	Methylation
OXT	, Methylation
DDR2	, Methylation
PNMA3	, Methylation
MAML2	, Methylation
C1S	, Methylation
CUL4B	Methylation
PLEKHG5	Methylation
HOXA2	Methylation
ICAM2	Methylation
PPAPDC3	Methylation
PLAC8	Methylation
KCTD1	Methylation
.C.D.	. FICTIVIATION

Methylation CALML3 **TAGLN** Methylation GPR62 Methylation CD6 Methylation KCNE1L Methylation KRT17 Methylation C20orf85 Methylation UBE2E3 Methylation DOCK8 Methylation **TP63** Methylation FOLR1 Methylation OLFML2B Methylation **ZNF185** Methylation **ACADVL** Methylation S100A1 Methylation **TNC** Methylation SCMH1 Methylation TNFAIP8L2 Methylation SOD3 Methylation RBP5 Methylation RUNX2 Methylation **ANPEP** Methylation COL17A1 Methylation C13orf16 Methylation C5orf32 Methylation ARHGEF4 Methylation Methylation GLI1 UBLCP1 Methylation CCDC88B Methylation PPP2R2B Methylation IL2RB Methylation APOC2 Methylation CLIC5 Methylation **PTGDS** Methylation WNT5B Methylation CCL22 Methylation LPP Methylation KRT16 Methylation SYT8 Methylation **RELB** Methylation Methylation MTMR2 STARD13 Methylation **CTSK** Methylation TLE4 Methylation EVC2 Methylation FAM131B Methylation

FUT7	Methylation
EMB	Methylation
CLDN19	Methylation
KLK8	Methylation
PHYHD1	Methylation
ACTG2	Methylation
HSPB2	Methylation
PIK3R1	Methylation
EFHA1	Methylation
IL17B	Methylation
RAB20	Methylation
COG6	Methylation
ENTHD1	Methylation
MED4	Methylation
NARG1L	Methylation